ECON 201A
ECONOMIC THEORY
PART I: CHOICE THEORY
FALL 2024
AUG 29 - OCT 15
COURSE OUTLINE

I. Contact information

– Instructor: Shachar Kariv [kariv@berkeley.edu]

– GSIs: Sara Neff [sara_neff@berkeley.edu] and Yu-Ting Ho [hoyuting@berkeley.edu].

II. Times

– Lectures: Tue and Thu 11-12:30 (Etcheverry 3108)

– Sections: Mon 8-10 and 2-4, and Fri 10-12 and 12-2 (Evans 65).

III. General information

ECON 201A is the first semester of the mandatory microeconomic theory sequence for first-year PhD students in the Economics Department. The first half of the fall semester focuses on choice theory, while the second half delves into general equilibrium theory (a separate syllabus will be provided for the latter). The final class for the first half will be held on Tue, October 15. The first-year theory sequence (ECON 201A and 201B) is designed to equip students with the skills necessary for conducting original research in economics. Although students from other departments who meet the prerequisites are welcome, this course is not intended to teach microeconomic principles for use in other fields. It is assumed that students already have a solid understanding of microeconomics at an advanced undergraduate level.

This part of the course covers key topics in choice theory and aims to develop essential theoretical tools. Due to time constraints, the topics addressed will represent only a small subset of what could, and ideally should, be covered in a comprehensive microeconomic theory course. Therefore, the course does not offer exhaustive coverage of micro theory. The approach is formal, with a substantial focus on theorems and proofs, and some sections require advanced mathematical understanding. Despite this, the course is intended as an introductory micro theory course for PhD students. The material is crucial for those planning to conduct applied research rather than specialize in pure theory. The course does not delve deeply enough into the details for students who plan to apply the theory extensively in their research.

IV. Prerequisites and enrollment

The course is open solely to PhD students and specially qualified undergraduates. The (strict) prerequisite is ECON 204 (or equivalent). There is probably variance in the extent of exposure to the materials in the course, and there may be gaps that one should catch up on, in particular if you did not take an advanced undergraduate micro theory course. Please come to see me as soon as possible if you do not feel confident that you have the necessary background.

All students must register to receive a letter grade in the class. The class cannot be audited or taken on a credit/no-credit basis. Anyone registered on a credit/no-credit basis will receive a no-credit grade. Auditing 201A is officially prohibited. The enrollment is cross-verified with the prerequisites at several points in the semester. Anyone enrolled in the course without the prerequisite, including anyone who received an unsatisfactory grade in 204, will receive an F grade for 201A regardless of course performance.

V. Office hours

By appointment. The GSIs will hold regular office hours. You can email us any question, and we will try to respond promptly. In case you have any trouble, there are plenty of opportunities for help. I would also be happy to discuss with you any issues beyond the course work, not necessarily of micro-theoretic substance. For basic questions regarding the course material (such as, understanding a step of a proof or the solution of a problem), please consult one of the GSIs. But please copy me on any emails you send to the GSI (and vice versa) to ensure we're all kept in the loop. I would also be happy to discuss with you any issues beyond the course work, not necessarily of microeconomic substance.

VI. Reading material

Handouts The class will rely on handouts that will be given for each class and also be available for downloading in PDF format from the course bCourses site. The notes will contain a very large amount of the material in the course, but are only necessary (and not sufficient) readings. They are a work in progress and inevitably contain errors. I would appreciate being told of any errors found in the notes.

Books The required textbooks for the course are:

– A. Rubinstein, *Lecture Notes in Microeconomic Theory: The Economic Agent* (hereafter, R).

– D. Kreps, *Microeconomic Foundations I: Choice and Competitive Markets* (hereafter, K).

The books present the main topics of micro theory at a level suitable for our purposes and emphasize the theory's foundations. They provide precise definitions and full proofs of a broad range of results. The notation and mathematical definitions in the book are standard. Rubinstein's book can be downloaded (for free) as a PDF from the author's website. There are also other excellent books around. A good additional reference for the course is:

– A. Mas-Colell, J. Green and M. Whinston, *Microeconomic Theory* (hereafter, MWG).

VII. Problem sets

The course will rely heavily on problem sets. The problem sets are meant to be learning tools and thus will not be counted for the course grade. Most questions will be from K and R. All questions in the covered chapters from K and R, even if not assigned in a problem set, are required material. Please work on the problem sets with each other. Answer keys will be distributed and available for downloading from the course bCourses site.

A key objective of this course is to equip you with a set of tools. While we will cover specific topics, the course places a strong emphasis on developing a systematic and rigorous approach to analyzing economic problems, which can (only?) by done using theory. Learning to think like an economic theorist is similar to learning to ride a bicycle—it requires practice. Simply observing how problems are approached in lectures or readings won't be enough for you to solve similar problems on your own. The only way to become proficient is to tackle the problems yourself.

VIII. Exam

The requirements for a grade in the class are as follows. There will be a final exam (worth approximately 1/2 of the class grade). The exam will test your basic knowledge of the course material and your ability to apply this material to new problems. The exam will be based on problem set type questions. It is in-class, closed book and closed note, but any definition or result required to answer a question will be provided. The exam for the 1st-half of the course will be held on Fri Oct 18 (not during normal 'business' hours) and theexam for the 2d-half on Fri Dec 13 from 9 AM to 12 PM.

IX. Tentative outline

Week	Dates	Topic	Readings
0	8/29	Introduction	
1	9/3-5	Choice, preference, and utility	K1 & R1-3
2	9/10-12	Properties of preferences and utility functions	K2 & R4
3	9/17-19	Basics of consumer demand	K3 & R5
4	9/24-26	Classic demand theory	K11 & R6
5	10/1-3	Revealed preference	K4 & R5
6	10/8-10	Choice under uncertainty	K5 & R9
7	10/15	Social choice	K8 & R9