

ECON 201A ECONOMIC THEORY
PART I: CHOICE THEORY
FALL 2023
AUG 24 - OCT 12
COURSE OUTLINE

I. Contact information

- Instructor: Shachar Kariv [kariv@berkeley.edu]
- GSIs: Sara Neff [sara_neff@berkeley.edu] and Andrew Tai [atai1@berkeley.edu]

II. Times

- Lectures: Tue and Thu 11-12:30 (Etcheverry 3106)
- 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 required microeconomic theory sequence for first-year PhD students in the Economics Department. The first half of the fall semester covers choice theory and the second half covers general equilibrium theory (a separate syllabus will be distributed for the second half). The last meeting of this half will be on Thu Oct 12. The theory sequence (ECON 201A and 201B) prepares students to conduct original research in economics. While qualified students from other departments are welcome, this course is not designed to teach microeconomic principles for application in other disciplines. Students are assumed to already understand microeconomics at an advanced undergraduate level.

This part of the course presents some of the main topics in choice theory and is designed to develop theoretical tools. Owing to the limitation of time, the topics covered will necessarily be only a small fraction of what one could (and ideally, should) cover in this course, and thus, the course cannot provide a complete coverage of micro theory. The general style of the course is formal, and the number of theorems and proofs is relatively high. For some parts, the formal mathematical requirements are not mild. That said, it is intended to give PhD students a basic course in micro theory. As such, the material taught in the course is necessary for students who want to do applied research and not specialize in pure theory. The course does not go deep enough into details for students who anticipate applying the theory 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

Online by appointment. Further details will be given in the first lecture. You can e-mail 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.

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.

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 will be held the evening of Thu Oct 19 (not during normal 'business' hours).

IX. Tentative outline

1. Aug 24: Introduction
2. Aug 31: Choice, preference, and utility (K1, R1-3) [no class on Aug 29].
3. Sep 5-7: Properties of preferences and utility functions (K2, R4)
4. Sep 12-14: Basics of consumer demand (K3, R5)
5. Sep 19-21: Classic demand theory (K10-11, R6)
6. Sep 26-28: Revealed preference (K4, R5)
7. Oct 3-5: Choice under uncertainty (K5, R7-8)
8. Oct 10-12: Social choice (K8, R9)