Brown University
Economics 2050, Microeconomics I

Fall 2019

Professors: Roberto Serrano and Rajiv Vohra
Teaching Assistant: Giacomo Rubbini

General References

The primary reference is:

An alternative, more compressed, reference is:
Jehle, G. and P. Reny (1998), Advanced Microeconomic Theory, Addison-Wesley, Reading, MA.

Finally, classic references for your microtheory personal library are:

Undergraduates: If you are an undergraduate student considering taking this class, please talk to the instructors during the first week of the semester in order to discuss the specifics of your case.

Academic integrity: We expect you to uphold the highest standards in terms of academic integrity. We take cheating on assignments or exams very seriously.

Special accommodations: If, due to a certified disability, you require special accommodations, please contact one of the instructors as soon as possible. We want to make sure that every student is included and given full access and opportunity in the course.

Estimates of time allocation: The following is an estimate of the time allocation required for the course. Needless to say, following these estimates is neither necessary nor sufficient to do well in the course. That is, there will
be students able to master the material perfectly with fewer hours, while on the other hand, arguing to the instructors that one has spent the suggested hours on the course will not be a consideration to determine the final grade. With these caveats, here are the estimates. Over 14 weeks, students will spend 3 hours per week in class (42 hours total), and 1 hour per week in discussion section (14 hours). Homework, reading, and studying will take approximately 7 hours per week (98 hours total). In addition, there are two 1.5-hour exams for which approximately 25 hours of review –5 hours for each of 5 days– is assumed.

**Evaluation:**

- Homework: 20%
- Exam 1, 1 - 2:30 p.m., Monday, October 21, 40%
- Exam 2, 9 - 10:30 a.m., Saturday, December 14, 40%

**Syllabus**

1. Classical Consumer and Producer Theories (Mas-Colell et al.’s Chapters 2-5):
   - Choice-based consumer theory and the weak axiom of revealed preference.
   - Preference-based consumer theory and utility.
   - Duality.
   - Elements of bounded rationality.
   - Aggregation.
   - Producer theory.

   - General equilibrium: exchange and production.
   - Equilibrium, efficiency and the core: the welfare theorems.
   - Existence of equilibrium.
   - General equilibrium under uncertainty.
   - Social choice.
   - Mechanism design and implementation.
List of Topics in each Lecture

Serrano’s lectures:


Class 2: Comparative statics of demand. Wealth and price effects. The matrix of price effects. Restrictions on wealth and price effects: Euler’s condition, Engel and Cournot aggregation conditions. The weak axiom of revealed preference (WARP).

Class 3: Implications of WARP. The compensated law of demand. Substitution effects. Differentiable version of the compensated law of demand: the negative semidefiniteness of the Slutsky matrix and the Slutsky equation. Is the Slutsky matrix symmetric? The singularity of the Slutsky matrix. WARP and preference maximization.

Class 4: Classical preference-based demand theory. The preference relation and its properties. Completeness, transitivity, desirability and convexity properties.

Class 5: Utility representation of preferences. Continuous preference relations and representability.


Class 9: Integrability. Recovering the expenditure function from demand. Recovering preferences from the expenditure function. The strong axiom of revealed preference (SARP). New characterizations of rationality and connections with bounded rationality.


Class 11: Producer theory. Production sets and their properties. The profit maximization problem. The supply correspondence and the profit function. The single output case: production function and conditions for profit maximization.


Exam 1: Monday October 21, 1:00 - 2:30 p.m.

Vohra’s lectures:

2.1 Exchange Economies, Welfare Theorems, Chapters 15, 16,

2.2 Existence of Walrasian Equilibrium, Chapter 17,

2.3 Replicated Economies and Core Convergence, Chapter 18,

2.4 General Equilibrium Under Uncertainty, Chapter 19.
2.5 Efficiency Notions Under Incomplete Information


2.6 Social Choice, Chapter 21.

2.7 Mechanism Design, Chapter 23.

Last class on Wednesday December 4.

Exam 2: Saturday December 14, 9:00 - 10:30 a.m., Saturday, December 14.