Class meets TTh 9:25am-10:40am in BB 271

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Syllabus for ECON 501 – Microeconomic Theory I
Camelia Bejan
Rice University - Fall 2012

COURSE DESCRIPTION

The purpose of this course is to develop a sound understanding of the basic tools of microeconomic analysis. We progress from Module 1, Consumer & Producer Theory, in which we study the optimizing behavior of individual actors (both consumers and producers) to Module 2, Competitive Markets, in which we analyze the interaction of these agents through markets, the determination of equilibrium prices and the allocation of resources and (produced) goods in the economy as a whole.

COURSE MATERIALS

Recommended textbook: Microeconomic Theory, by A. MasColell, M. Whinston, and J. Green, Oxford, 1995.

Course website: Our class has a web page on OWL-Space. Important information, including the syllabus, homework assignments, some lecture notes, and various announcements will be posted there.

LIST OF TOPICS AND READINGS

The following is a brief outline of the topics that will be covered. The relevant readings (that is, chapter and section) from the textbook are given in brackets at the end of each subtopic.

Module 1: Consumer & Producer Theory

1. Consumer Theory and Demand (3 weeks)

- axiomatic description of consumer preferences (1.B, 2.A-2.C, 3.A-3.C)
- utility maximization and properties of demand functions (2.D, 3.D)
- duality theory: expenditure and indirect utility functions (3.E-3.G)
- integrability and revealed preference theory (2.E, 2.F, 3.H, & 3.J)
- evaluation of economic change (3.I)

2. Choice under Uncertainty (2 weeks)

- Expected Utility Theory (6.A, 6.B)
- measures of risk and risk aversion (6.C, 6.D)

3. Production and Cost (1 week)

- production sets and production functions (5.A, 5.B)
- profit maximization and cost minimization (5.C)
- duality theory: profit and cost functions
- aggregation of supply (5.E)
- efficient production (5.F)

Module 2: Competitive Markets

1. Introduction to General Equilibrium (3 weeks)

- Pure Exchange: The Edgeworth Box (MWG 15.B)
- One-Consumer, One-Producer Economy (MWG 15.C)
- General vs. Partial Equilibrium (MWG 10 C. and 15.E)
- GE in Production Economies (MWG 16.B)
- The Welfare Theorems (MWG 16.C-F)
- Existence of Walrasian equilibrium

3. Foundations of Competitive Equilibrium (1 week)

- The Core (MWG 18.B)
- Core Convergence & Equal Treatment (MWG 18.B)

4. GE under Uncertainty (3 weeks)

- Contingent Commodities & Arrow-Debreu Equilibrium (MWG 19.B-C)
- Sequential Trade (MWG 19.D)
- Asset Markets (MWG 19.E)
- Incomplete Markets (MWG 19.F)

EXAMS AND GRADES

Evaluation of your course performance will be based on problem sets, a midterm and a final exam. A missing solution set is converted to a zero score. The problem set with the lowest score will not be included in the computation of your final score.

Working together on homework assignments is encouraged, but the final product submitted for grade must be the **individual work** of the person turning it in. That means you are allowed to discuss with your colleagues the material of the lectures, as well as various problem solving techniques, but the final solution you turn in should be written in

your own words. Please be aware that homework is an essential part of the course and it will not help you to copy someone else's assignment.

The midterm will be held on Tuesday, October 9th, during regular class hours. The final exam will be a three-hour written exam. Both exams are closed-book.

The final numerical score will be the weighted average of the scores obtained on the homework assignments, the midterm and the final exam. The weights are defined as follows:

- 25% for homework assignments,
- 30% for the midterm if midterm score > final score; otherwise 0%,
- 45% for the final exam if midterm score > final score; otherwise 75%.

The following table will be used to convert the final numerical score on the course to letter grades. I reserve the right to lower the cutoffs but not to raise them.

Score > 95%	A+
Score ≤ 95% and > 85%	A
Score ≤ 85% and > 80%	A-
Score ≤ 80% and > 75%	B+
Score ≤ 75% and > 70%	B
Score ≤ 70% and > 66%	B-
Score ≤ 66% and > 63%	C+
Score ≤ 63% and > 60%	C
Score ≤ 60% and > 55%	C-
Score ≤ 55% and ≥ 50%	D
Score < 50%	F

OTHER USEFUL TEXTS

1. Debreu, G., "Theory of Value," Yale U. Press, 1959.
2. Hildenbrand, W., "Equilibrium analysis : variations on themes by Edgeworth and Walras," Elsevier Science Pub. Co., 1988.
3. Hildenbrand, W. "Core and Equilibria of a Large Economy," Princeton University Press, 1974
4. Kreps, D., "A Course in Microeconomic Theory," Princeton U. Press, 1990.
5. LeRoy, S. and J. Werner, "Principles of Financial Economics," Cambridge U. Press, 2001.
6. Rockafellar, T. A., "Convex Analysis," Princeton U. Press, 1970.
7. Takayama, A., "Mathematical Economics," 2nd Edition, Cambridge U. Press, 1985.
8. Diamond, P. and M. Rothschild, "Uncertainty in Economics: Readings and Exercises," Academic Press, 1989.
9. Varian, H., "Microeconomic Analysis," (3rd edition), Norton, 1992.
10. Angus Deaton and John Muellbauer, "Economics and Consumer Behaviour," Cambridge University Press, 1980.

11. Gravelle, H. and R. Rees, "Microeconomics," Longman, 2nd edition, 1992.
12. Jehle, G.A. and Philip J. Reny, "Advanced Microeconomic Theory," 2nd edition, Addison Wesly, 2001.