

ECG-701: Microeconomics I

Fall 2015: Tuesday & Thursday, 10:15-11:30 AM; 102 David Clark Labs.

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Office hours: Tuesday 3:00 – 5:00 PM and
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Course Description:

ECG 701 is the first of two semesters of Ph.D. microeconomics. The syllabus below lays out the sequence of topics and associated readings. The general structure of the micro sequence is that 701 covers theories of the consumer and the firm, welfare measurements, partial equilibrium in the perfectly competitive markets, imperfect competition and market power. ECG 702 covers general equilibrium, social choice and welfare, game theory, uncertainty and information, and mechanisms design.

The purposes of the core sequences are to teach the theoretical tools required to read the literature, to prepare you for the written preliminary exams, and to lay the groundwork for your dissertation research.

The prerequisites for 701 include a master's-level microeconomic theory course such as ECG 700, a year of calculus (MA 131/231 or MA 141/241/242), and familiarity with constrained optimization and linear algebra such as one would obtain from ECG 765.

Required Textbooks:

Jehle, G.A. and P.J. Reny (JR): Advanced Microeconomic Theory, Second Edition, AddisonWesley (2001).

Mas-Colell, A., M.D. Whinston and J.R. Green (MWG): Microeconomic Theory, Oxford University Press (1995).

Silberberg, E. and W. Suen (SS): The Structure of Economics: A Mathematical Analysis, Third Edition, McGraw-Hill (2001).

Additional Readings:

See course outline and reading assignments.

Class Format:

The class will consist of my lectures which are based on the material covered in different readings and my own notes as well as problem solving sessions carried out by my teaching assistant. The lectures will take place twice a week during the officially allocated time slots and problem solving sessions will take place once a week during a mutually agreeable (to be determined) time slot.

Course Requirements:

Your grade for the course will be determined based on your performance in two midterm exams (25% each), a comprehensive final exam (35%) and several (no more than 5) take home problem sets (15%).

Grading:

One should expect the following percentage performance/grade schedule:

- 90 - 100% = A range;
- 75 - 89% = B range;
- 61 - 74% = C range.

TENTATIVE COURSE OUTLINE AND READING ASSIGNMENTS

- 1. Mathematical Background** (on your own, no lectures)
JR: A1, A2; MWG: M.A-M.N; SS: 1-7.
- 2. Consumer Theory**
 - 2.1. Preferences and Utility
JR: 1.1, 1.2; MWG: 1A-B, 2A-E, 3A-C
 - 2.2. Consumer Problem
JR 1.3; SS: 10.1, 10.2
 - 2.3. Indirect Utility and Expenditure
SS:10.3 - 10.6; JR:1.4 - 1.5; MWG: 3D,E,G
 - 2.4. Duality Results
Cornes, R. Duality and Modern Economics, Cambridge University Press (1992): 2.1 -2.6.
JR: 2.1; MWG: 3F,G

3. Topics in Consumer Theory

- 3.1. Revealed Preferences and Exchange
SS: 11.1, 11.2; JR: 2.3; MWG: 2F, 3J
- 3.2. Integrability
SS: 11.2; MWG: 3H; JR: 2.2
- 3.3. Aggregation
SS: 11.3; MWG: Ch4; Cornes: 8.1, 8.2
Varian, H. Microeconomic Analysis, 3rd edition, Norton & Co. (1992):
9.3-9.4.
- 3.4. Welfare Evaluation
SS:11.5; MWG: 3.I; JR: 4.3
- 3.5. Labor-Leisure Choice
SS: 10.7

FIRST MIDTERM EXAM

4. Theory of the Firm

- 4.1.1. Production
JR: 3.1, 3.2; MWG: 5A, 5B
- 4.1.2. Cost Functions
JR: 3.3, 3.4; SS: 8.1 – 8.10; MWG: 5C, 5D
- 4.1.3. Competitive Firm
JR: 3.5

5. Partial Equilibrium

- 5.1.1. Perfect Competition - Short Run
JR: 4.1; MWG: 10A-C
- 5.1.2. Entry and Exit – Long Run Equilibrium
MWG: 10F,G
- 5.1.3. Imperfect Competition and Market Power
JR: 4.2; MWG: 12A,B; Varian, Ch.14

SECOND MIDTERM EXAM

6. Contract and Incentives (Time permitting)

6.1.1. Introduction to Choice under Uncertainty (Comprehensive treatment in EC-702)
SS: Ch.13, Varian Ch.11

6.1.2. Principal-Agent Model

Macho-Stadler, I. and J.D. Perez-Castillo. An Introduction to the Economics of Information. 2nd Edition, Oxford University Press (2001):
Ch.2

6.1.3. Moral Hazard

Macho-Stadler, I. and J.D. Perez-Castillo. An Introduction to the Economics of Information. 2nd Edition, Oxford University Press (2001):
Ch.3

6.1.4. Moral Hazard in Teams and Tournaments

Bolton, P. and M. Dewatripont. Contract Theory. The MIT Press (2005):
8.1

Tsoulouhas, T. and T. Vukina. Integrator Contracts with Many Agents and Bankruptcy. *American Journal of Agricultural Econ.*, Vol. 81 (1), 1999: 61-74.

Levy, A. and T. Vukina. The League Composition Effect in Tournaments with Heterogeneous Players: An Empirical Analysis of Broiler Contracts. *Journal of Labor Economics*, Vol. 22 (2), 2004: 353-377.

FINAL EXAM – Tuesday, December 15, 8:00-11:00AM.

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