

Syllabus

Econ 512 – Microeconomic Theory Spring 2012

Professor William Neilson
Lecture TR 3:40 – 4:55, Haslam 534
Lab Wednesday 4:40 – 6:35, Haslam 534

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Office hours: MW, 10:00 – 11:30

This course continues the student’s training in microeconomic theory. It splits its focus on three broad topics – behavior toward risk, game theory, and general equilibrium theory. The first two are tools, and students will learn how to model and describe behavior in settings in which the future is uncertain and in strategic settings in which one agent’s action impacts another’s well-being. Compared to the problems solved in Econ 511, both of these areas provide for simplified mathematics because agents typically have only a single choice variable. The topics are conceptually more difficult, though.

General equilibrium theory is not a tool. Rather, it is the formalization of the notion of the invisible hand introduced by Adam Smith more than 200 years ago. Many graduate programs pay little attention to general equilibrium theory these days, but there are two good reasons to talk about it. First, it is a key component of international trade theory, which is one of the advanced fields of specialization offered at UT. Second, the theory gained significant popular attention during the most recent financial crisis, and every Ph.D. in economics or finance should be able to understand what the press says about general equilibrium.

Besides these three topics, the course will devote considerable attention to topics that economists might teach in an MBA strategy class. We will not cover them in a manner suitable for an MBA, though. Rather, they will be taught mathematically as examples or applications of the tools presented in the course. Because of this content, students will receive a bonus (if you will) of becoming ready to teach in an MBA program when they leave. This leverages (MBA-speak) the Economics Department’s position in a College of Business Administration.

Grades:

The course grade will be based upon a comprehensive final exam (covering the entire course, a midterm exam, and weekly problem sets. The grade breaks down as follows:

40%	Final exam
30%	Midterm exam
30%	Problem sets

Excused absences:

A student who misses an exam or assignment with an excused absence should meet with the professor to schedule a make-up exam at the professor’s convenience.

Texts:

- Mas-Colell, Andreu, Michael Whinston, and Jerry Green (1995). *Microeconomic Theory*, Oxford University Press.
This book is the standard in the profession. The reason why we use a 15-year-old book is that its existence has made it so that no one has any incentive to write a new one.
- Gibbons, Robert (1992). *Game Theory for Applied Economists*, Princeton University Press.
This is a simple and intuitive introduction to game theory. It is especially useful for those who have not seen it before.

Course Outline:

Required readings are in boldface, suggested (optional) readings are in normal font. The abbreviations are MWG for Mas-Colell, Whinston, and Green. Readings outside of these and the Gibbons text have links.

	Topic	Readings
Jan 12	Introduction to class and expected utility	
Jan 17	EU representation theorem	MWG 6.B – Expected Utility Theory
Jan 19	Risk aversion	MWG 6.C – Money Lotteries and Risk Aversion
Jan 24	Increases in risk	MWG 6.D – Comparison of Payoff Distributions in Terms of Return and Risk
Jan 26	Frontiers in decision theory	Starmer, C. (2000). Developments in non-expected utility theory: The hung for a descriptive theory of choice under risk, <i>Journal of Economic Literature</i> 38, 332-382. Link
Jan 31	Game theory – types of games	MWG 7 – Basic Elements of Noncooperative Games
Feb 2	Simultaneous games of complete information	Gibbons 1.1 – Basic Theory: Normal-Form Games and Nash Equilibrium Gibbons 1.2 - Applications
Feb 7	Mixed strategies	Gibbons 1.3 – Advanced Theory: Mixed Strategies and Existence of Equilibrium JR 7.2 – Strategic Form Games
Feb 9	Sequential games of complete information	Gibbons 2.1 – Dynamic Games of Complete Information Gibbons 2.2 – Two-Stage Games of Complete but Imperfect Information
Feb 14	Simultaneous games of incomplete information	Gibbons 3.1 – Theory: Static Bayesian Games and Bayesian Nash Equilibrium
Feb 16	Auctions	Gibbons 3.2 - Applications
Feb 21	Tournaments	Gibbons 2.2.D – Tournaments
Feb 23	Sequential games of incomplete information	Gibbons 4.1 – Introduction to Perfect Bayesian Equilibrium Gibbons 4.2 – Signaling Games
Feb 28	More sequential games of incomplete information	Gibbons 4.3 – Other Applications of Perfect Bayesian Equilibrium
Mar 1	More games	Goeree, J. and C. Holt (2001). Ten little treasures of game theory and ten intuitive contradictions, <i>American Economic Review</i> 91, 1402-1422. Link
Mar 6	EXAM	
Mar 8	Competition	MWG 10 – Competitive Markets
Mar 13	Adverse selection	MWG 13.B – Informational Asymmetries and Adverse Selection

Mar 15	Monopoly	MWG 12.B – Monopoly Pricing
Mar 27	Oligopoly	MWG 12.C – Static Models of Oligopoly
Mar 29	Collusion and cooperation	MWG 12.D – Repeated Interaction
Apr 3	General equilibrium theory	MWG 15.B – Pure Exchange: The Edgeworth Box MWG 15.C – The One-Consumer, One-Producer Economy
Apr 5	International trade	MWG 15.D – The 2 x 2 Production Model
Apr 10	General equilibrium theory	MWG 17.B – Equilibrium: Definitions and Basic Equations MWG 17.C – Existence of Walrasian Equilibrium
Apr 12	Welfare theorems	MWG 16 – Equilibrium and Its Basic Welfare Properties
Apr 17	Externalities	MWG 11.B – A Simple Bilateral Externality
Apr 19	Public Goods	MWG 11.C – Public Goods
Apr 24	Bargaining	Osborne, Martin and Ariel Rubinstein (1990) . <i>Bargaining and Markets</i> , Academic Press, chapter 2. http://theory.economics.utoronto.ca/books/
Apr 26	Bargaining	Osborne, Martin and Ariel Rubinstein (1990) . <i>Bargaining and Markets</i> , Academic Press, chapter 3. http://theory.economics.utoronto.ca/books/
May 1 (Tues)	FINAL EXAM 2:45 pm – 4:45 pm	

Fine print:

Plagiarism and Academic Honesty:

"An essential feature of The University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity."

Please see www.lib.utk.edu/instruction/plagiarism/honor.html for more information.

Disabilities:

Students who have a disability that requires accommodation should make an appointment with the Office of Disability Services (974-6087) to discuss their specific needs.