Microeconomic Theory II  
Econ 7342, Spring 2008

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This course is the second part of the first-year graduate Micro theory sequence. It studies how groups of individuals make or should make choices. The course has four parts: 1. Social choice, 2. General Equilibrium (GE), 3. Game theory, 4. Contract theory. Of these, Game theory will get the most emphasis (about half the semester).

Lectures: M, W 9.30-11 in McElhinney 115. No lecture on Jan 21 (Martin Luther King Day), and Mar 17 & 19 (Spring break).  

Prerequisites

Graduate level consumer and producer theory. Everyone planning to take the course should send a brief email to Adam with a list of the graduate-level economics courses they have taken (name of course + textbook used) at UH or elsewhere.

Grading

Problem sets (20 %), Midterm (30 %), Final (50 %)  
Weekly problem sets will be due at the start of the Monday lectures.  
I plan to have the midterm on Monday, March 10, 9.30-11, and the final on Monday, April 28, 9-11.

Textbooks

(i) Main texts  
For game theory, R. Gibbons: Game Theory for Applied Economists  
For the rest, H. Varian: Microeconomic Analysis

(ii) Secondary texts  
A. Mas-Colell, M. Whinston, and J. Green: Microeconomic Theory (The comprehensive reference on GE, and micro theory in general)  
D. Fudenberg and J. Tirole: Game theory (The comprehensive reference on game theory)  
M. Osborne: Introduction to game theory (more intuition and examples)
P. Bolton and M. Dewatripont: *Contract Theory* (The comprehensive reference on contracts)
W. Nicholson: *Microeconomic theory* or any other undergraduate micro book that you are familiar with.

**Agenda**

I. SOCIAL CHOICE
Pareto optimality; Edgeworth box; Social welfare functions; Arrow’s theorem; Core; Nash bargaining

II. GENERAL EQUILIBRIUM
Exchange economies; Existence of competitive equilibrium; Fundamental welfare theorems; Equilibrium and the core
*Readings*: Varian 17, 21.1

III. GAME THEORY
1. Static games of complete information
   Normal form representation; Dominance and iterated elimination; Nash Equilibrium
   *Readings*: Gibbons 1.1-1.2 (except 1.2.C)
   Mixed strategies; Existence of NE; Rationalizability
   *Readings*: Gibbons 1.3

2. Dynamic games of complete information
   Extensive form representation; Backward induction
   *Readings*: Gibbons 2.1, 2.4A
   Subgame perfection; Randomization in extensive form
   *Readings*: Gibbons 2.4B, 2.2B,C
   Repeated games; Folk theorems
   *Readings*: Gibbons 2.3

3. Static games of incomplete information
   Bayesian games; Bayesian Nash equilibrium
   *Readings*: Gibbons 3.1, 3.2

4. Dynamic games of incomplete information
   Perfect Bayesian Equilibrium; Signaling games
   *Readings*: Gibbons 4.1, 4.2
   Other applications; Extensions
   *Readings*: Gibbons 4.3A, 4.3C, 4.4

IV. CONTRACT THEORY
Adverse selection and screening; Applications
*Readings*: Varian 25.9, 25.6, 14.5-7
Moral hazard; Extensions
*Readings*: Varian 25.4