EC 706: MICROECONOMIC ANALYSIS II
SPRING 2007

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Office Hours: 2:10-3:00 MWF, and by appointment at other times

COURSE OBJECTIVES

This is a second graduate course in microeconomic theory. It presumes competence in basic calculus-based microeconomics and certain related areas of mathematics. The purpose of the course is:

- to solidify your technical and intuitive understanding of micro theory as a mathematically structured set of ideas,
- to expand the scope and level of your acquaintance with micro theory, to new topics and new methods of analysis,
- to provide you with a solid platform of theory upon which you can build your professional work, whether it be further theoretical investigation or applied or empirical analysis, and
- to assure you a satisfying level of professional literacy with respect to orthodox micro theory, to share with fellow economists even if you do not apply micro theory in your work.

To these ends, the course will include:

- presentation of core microeconomic theory via lectures, a basic text, and supplementary readings,
- problem sets to give you an opportunity to exercise your analytical abilities,
- one short written project to expand your model-building skills,
- exams to demonstrate your development in a formal structure.

GRADES

Course grades will be based on the following:

Exams:
- Will include a mid-term and a final exam, each to count 25 percent of the course total
- Each exam will be a mix of "TFU", technical problems, and open-ended explanation.
- Scheduled exam dates are: Wed 7 March and Tue 8 May (11:20-1:20)

Problem sets:
- Approximately 6 problem sets will count for a total of 25 percent of the course total. Due dates TBA.
- Problem sets will be scored on a 5-point basis as follows:
  5 = Thorough, diligent, and mostly correct
  4 = Thorough and diligent, with mistakes but overall display of understanding
  3 = Thorough and/or diligent, but with important misunderstandings
  2 = Pervasive misunderstandings and/or major omissions
  1 = Minimal effort
- Collaboration on problem sets is allowed, but pure copying certainly is not. The answers you submit must be your own presentation, and must reflect an understanding you have established in your own head, even if the understanding is based on collaboration with colleagues.

Short written project:
- Will count for 25 percent of the course total.
- Will be developed and submitted in stages; due dates TBA.
- Will be developed collaboratively in teams of 2.
- Will ask you to invent and explain a microeconomic model on a topic assigned to your team.
- Will be described more fully in a forthcoming handout.

The overall letter grade for the course is expected to be determined according to the following scale:

95 - 100%	A+	80 - 84%	B+	50 - 64%	C
88 - 94%	A	70 - 79%	B	40 - 49%	D
85 - 87%	A–	65 - 69%	B–	0 - 39%	F

REQUIRED BACKGROUND

As stated above, this course presumes competence in basic calculus-based microeconomics and certain related areas of mathematics. Please note the following:

- "Basic calculus-based microeconomics" means the material normally covered in EC506; an outline of the topics often covered in EC506 is attached.
- As EC706 uses this foundation to expand the microeconomic topics and methods with which you are familiar, it often will briefly present EC506 concepts as a starting point, especially to help you adapt to new notation and vocabulary that the text authors apply to concepts you already know.
- Since the EC506 introductions to game theory and to general equilibrium issues are usually brief, we will introduce those topics from scratch.
- "Certain related areas of mathematics" mostly means multi-variate calculus and its application to constrained and unconstrained optimization problems, as well as simple skills such as solving systems of simultaneous equations, and certain topological concepts. This background is well covered in EC501.
- If you have concerns about the suitability of your background, please feel free to talk with the instructor.

COURSE OUTLINE

Texts: Jehle and Reny, *Advanced Microeconomic Theory*, 2nd. (Addison-Wesley-Longman, 2001)
Gibbons, *Game Theory for Applied Economists* (Princeton, 1992)
Varian, *Microeconomic Analysis*, 3rd. (Norton, 1992)

Weeks	Topics	Readings *in Jehle & Reny:*	*in Gibbons:*	*in Varian (optional):*
1 - 4	BASIC THEORY: ELABORATIONS AND EXTENSIONS			
	A. Elaborations on consumer theory			
	▸ Background to assure for yourself	Most of Ch. 1		Ch. 7; Secs. 8.1-8.4
	▸ The topology of preferences	Sec. 1.2		Sec. 7.1
	▸ Duality and integrability	Secs. 2.1 and 2.2		Secs. 8.5 and 8.6
	▸ Revealed preference	Sec. 2.3		Secs. 8.7 to 8.11
	▸ Uncertainty	Sec. 2.4		Ch. 11
	B. Elaborations on producer theory			
	▸ Background to assure for yourself	Most of Ch. 3		Most of Chs. 1 to 5
	▸ Special topics on production functions	Sec. 3.2		Secs. 1.9 and 1.10
	▸ Duality in production	Sec. 3.4		Ch. 6
	▸ Cournot and Bertrand oligopoly	Sec. 4.2		Sec. 16.4
5 - 8	MARKETS AND WELFARE			
	C. Partial equilibrium analysis			
	▸ Background to assure for yourself	Secs. 4.1 and 4.2		Chs 13 and 14
	▸ Efficiency concepts	Sec. 4.3		Chs 10 and 13
	D. General equilibrium models			
	▸ Pure exchange economies	Secs. 5.1 and 5.2		Sec. 9.1; Ch. 17
	▸ Production economies	Sec. 5.3		Ch. 18
	▸ Core and equilibria	Sec. 5.4		Ch. 21
	E. Social choice and welfare	Ch. 6		Chs. 22 to 24
11-15	STRATEGIC BEHAVIOR			
	F. Game theory	Ch.7		Ch. 15
	▸ Static games of complete information		Ch. 1	
	▸ Dynamic games of complete information		Ch. 2	
	▸ Static games of incomplete information		Ch. 3	
	▸ Dynamic games of incomplete information		Ch. 4	
	G. Information economics	Ch.8		Ch. 25