Economics 602 (CRN 067699) Syllabus and Reading List, Fall 2006

Instructor: Dimitrios Diamantaras, Ph.D.
Associate Professor of Economics

This is the last of the microeconomics courses in the Economics Ph.D. program. It covers the basics of game theory, imperfect information models, general equilibrium analysis, and welfare economics.

The class meets on Tuesdays from 4:40 p.m. to 7:10 p.m. in Tuttleman 400AB. I can be found in Ritter Annex 623, telephone number 215-204-8169. My office hours there are Tuesdays and Thursdays 11:45 a.m. to 12:30 p.m. and Wednesdays 11:00 a.m. to 1:00 p.m. Appointments for other times can always be arranged by e-mail.

My e-mail address is dimitrios.diamantaras@temple.edu and I encourage you to use it for most of your questions about the course. Also, the course is available on Blackboard, and you should monitor activity there regularly for announcements and handouts.

There will be regular homework assignments throughout the semester. The assignments will be graded and the homework average grade will count for 20% of the final grade. There will be an in-class closed-book midterm exam (30% of the final grade) and an in-class closed-book cumulative final exam (50% of the final grade). If a student improves his/her grade on the final exam compared to that of the midterm, the final exam grade will serve for 80% of that student's grade. I will give no make-up exams or incomplete grades, unless a student proves to my satisfaction that he/she missed an exam for a reason at least as serious, in my judgment, as for instance being hospitalized on the day of the exam; if such an exception is to occur, I must receive notification of the emergency before the start of the examination. Questions on the material and the homework problems will be most welcome all semester long.

Microeconomics is a vast field. The following tiny selection of books will be referred to in the course outline below. Double-starred items are mandatory readings and are available in the bookstore. All other items are recommended readings.
Sources

** Mas-Colell, A., M. Whinston, and J. Green, Microeconomic Theory, Oxford University Press, 1995 (henceforth denoted by “MWG”).** This is a great comprehensive text, and an essential reference book for you to own and use for many years to come; I suggest that you ration out the unassigned part of the book for you to read in your free time, preferably before you start your dissertation research; you will find this effort richly rewarding. You should not be discouraged by MWG’s level of mathematical sophistication; that’s why you took Economics 510 and 610, and I am here to help you get over the mathematical jargon and into the heart of the matter if further help is required. The reason so much mathematical notation appears in this book is that it is an essential tool for doing economics carefully, i.e., correctly.

** Osborne, M.J., An Introduction to Game Theory, Oxford University Press, 2004 (henceforth denoted by “O”).** A first-rate book on game theory, targeted to the advanced undergraduate student. It makes an excellent companion to the dense chapters on game theory in MWG.


** Milgrom, P., Putting Auction Theory to Work, Cambridge University Press, 2004 (henceforth denoted by “M”).** A fine text on auctions. It discusses the mechanism design approach to the design of auctions and many of the real-life complications the auction designer faces. Written by one of the pioneers of the FCC spectrum auction design in the 1990s, who is also a great expositor of difficult concepts.

** Wolfstetter, E., Topics in Microeconomics: Industrial Organization, Auctions, and Incentives, Cambridge University Press, 1999.** This “alternative” textbook emphasizes the most recent developments in partial equilibrium analysis, making heavy use of game theory. It is very much “in the spirit of the times”. It covers a wide range of topics, and I highly recommend perusing it in order to round off your microeconomics education and to look for appetizing areas in which to specialize and do research.

** Krishna, V., Auction Theory, Academic Press, 2002.** An up-to-date survey of the fast-moving field of auction theory. You may want to consult this book for supplementary material on auctions when we reach this topic in the course. It is a good complement to M and more thorough in its presentation.
**GARDNER, R.,** *Games for Business and Economics,* Wiley, second edition, 2003. This is a nice account of (mostly noncooperative) game theory written from the point of view of someone interested in applications to the business world. It is an excellent book to be reading in parallel with the more notation-heavy chapters on game theory in JR or MWG, although O may be sufficient for this purpose.

**RASMUSEN, E.,** *Games and Information, An Introduction to Game Theory,* third edition, Blackwell, 2001. A very good introduction to applied game theory and imperfect information models. This is a good book to consult when studying these topics, and a good reference book, likely to prove especially useful as a complement to MWG when you prepare for the microeconomics prelim.

**SALANIÉ, B.,** *The Economics of Contracts: A Primer,* second edition, MIT Press, 2005. A nice introduction to contract theory, roughly at the level of MWG, but with more space to devote to the topic than MWG could afford.


**Course Outline**

This outline is subject to small changes as the semester proceeds. I will try not to succumb to the temptation of skipping material; I have already left out too much that I would ideally like to include in this course. Mandatory readings appear in boldface type.

**29 August** General Equilibrium I. **MWG chapter 15.** Helpful additional readings: JR, sections 5.1, 5.2.

**5 September** General Equilibrium II. **MWG chapter 16.** Helpful additional readings: JR, sections 5.3, 5.4.

**12 September** Game Theory I. Foundations. **MWG chapter 7; O chapter 1.**

**19 September** Game Theory II. Normal Form Games: Dominance, Rationalizability. **MWG sections 8.B, 8.C; O chapter 12.**

**26 September** Game Theory III. Normal Form Games: Nash Equilibrium. **MWG section 8.D; O chapters 2, 3, 4.**
3 October  Game Theory IV. Bayesian Games, Bayesian-Nash Equilibrium.  
MWG section 8.E; O chapter 9.

10 October  Extensive Form Games: Subgame Perfect Equilibrium, Weak 
Perfect Bayesian Equilibrium, Perfect Bayesian Equilibrium, Sequential 

17 October  MIDTERM EXAM: In-class, closed-book exam.


31 October  Asymmetric Information Models, Part II. MWG chapter 14.

7 November  Mechanism Design. MWG chapter 23; M chapters 1, 2.

14 November  Application of Mechanism Design: Auctions. Chapter 8 from 
Wolfstetter, will be distributed.

21 November  No class; treat this day as a Thursday (see Temple University’s 2006–
2007 academic calendar).

28 November  Externalities and Public Goods. MWG chapter 11, Thom-
son’s survey, to be handed out in class.

5 December  Social Choice. MWG chapter 21; Handout on social choice.

12 December  FINAL EXAM: in-class, closed-book exam.