Economics 8106 (CRN 040662) Syllabus and Reading List,
Fall 2008
Instructor: Dimitrios Diamantaras, Ph.D.
Associate Professor of Economics
Version of 2008-08-22

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. While there is a substantial amount of theoretical material to cover, the course does cover several applications of the theory, especially of game theory.

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 813, telephone number 215-204-8169. My office hours are Tuesdays and Thursdays 3:30 p.m. to 4:15 p.m. and Wednesdays 3:00 p.m. to 4:15 p.m. Appointments for other times can always be arranged by e-mail. Occasionally I will have to cancel or change a schedule office hour period, depending on my committee meeting schedule. I will provide warning on such changes on Blackboard as early as is feasible.

My e-mail address is dimitrios.diamantaras@temple.edu and I encourage you to use it for most of your questions about the course. Questions on the material and the homework problems will be most welcome all semester long, whether submitted by email or asked in person in office hours. Do not ever delay asking a question! 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 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.

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 or will be distributed in class. All other items are recommended readings.
Sources

** Diamantaras, D., K. Campbell, E. Cardamone, S. Deacle, and L. Delgado, *A Toolbox for Economic Design*, 2008 draft, typescript, henceforth denoted by “T”. This is the product of a four-year long effort by myself and four graduate students to write an accessible introduction to the field of economic design. The book is under contract for publication with Palgrave Macmillan and should appear in bookstores next June.

** 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; I am here to help you get over the mathematical jargon and into the heart of the matter if further help is required. Also, the *Toolbox for Economic Design* has been written in such a way as to provide a gradual introduction to the systematic use of mathematical notation to express economic ideas. The reason that economics uses so much mathematical notation is that it is an essential tool for doing economics carefully, i.e., correctly.


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 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.

**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.

**Bolton, P. and Dewatripont, M., Contract Theory, MIT Press, 2005.** An extensive treatment of contract theory, covering many applications as well as dynamic contracting issues and incomplete contracts.

### Course Outline

This outline is subject to small changes as the semester proceeds. Mandatory readings appear in boldface type.

**2 September**  Institutions in economics, social choice. T, Chapter 1; MWG, Chapter 21.

**9 September**  Private good economies. MWG Chapter 15.

**16 September**  Public good economies. T, Chapter 11 (Appendix). MWG Chapter 11, William Thomson’s 1999 survey (will be distributed).

**23 September**  Public good economies, continued.
30 September  Game Theory I. Foundations. MWG Chapter 7, O Chapter 1.


14 October  Game Theory III. Normal Form Games: Nash equilibrium. MWG Section 8.D, O Chapters 2, 3, 4.

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

28 October  Game Theory IV: Bayesian Games. MWG Section 8.E, O Chapter 9.

4 November  Game Theory V. Extensive Form Games: SPE, WPBE, PBE. MWG Sections 9.B,C, O Chapters 5, 6, 7, 10.

11 November  Information Economics. JR Chapter 8.

18 November  Dominant Strategy Implementation. T, Chapter 2.

25 November  No class; treat this day as a Thursday (see Temple University’s 2007—2008 academic calendar).

9 December  Bayesian Equilibrium and Mechanism Design. T, Chapter 3.

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