Economics 390   **Peter H. Matthews**
Fall Term 2010   **Warner 305F (5591)**
Su 8-10 (Lib Café) Tu 10-12 (W305F)   **pmatthew@middlebury.edu**

Game Theory II
http://community.middlebury.edu/~pmatthew/teaching/teaching/econ390.html

The principal focus of this course, more a companion than a sequel to Game Theory I, is the economics of information and incentives, with a particular focus on auctions, moral hazard, adverse selection and signaling. A wide range of practical applications will also be discussed, including, but not limited to, labor, corporate finance, development, health and auctions. Students will also use experimental methods to explore another application, information cascades.

Text. Our principal reference will be the second edition of Ines Macho-Stadler and David Perez-Castrillo's *An Introduction to the Economics of Information: Incentives and Contracts* (Oxford University Press, 2001), new copies of which can be purchased at the bookstore. We shall also read several chapters of Vijay Krishna's *Auction Theory* (Academic Press, 2002), which will be available on reserve. All other readings will either be distributed in class or available online.

Evaluation. Grades will be determined as follows:

Problem Sets	30%
Group Experimental Project	25%
Midterm Exam	20%
Final Exam	25%

The experimental project will allow students to explore, in small groups, another application of particular relevance to financial and other asset markets, information cascades. Students will use Charles Holt's Veconlab to implement their own experiment and present initial results during the week of November 15th–20th. The final papers are due on December 3rd.

At this point, the midterm and final are both scheduled to be 24 hour take home exams, the first distributed sometime during the week of October 25th-29th, and the second during the final exam period. Neither the format (a three hour "open book final" is one alternative, for example) nor the timing (of the midterm, at least) is set in stone.

Topics

Methods Review I: Continuous Random Variables and their Properties

Vijay Krishna, *Auction Theory*, Appendices A, B, C. Appendices F and G are optional but recommended.

SIPV Auctions and Revenue Equivalence

Vijay Krishna, Chapters 1, 2 and 3

Extensions

Vijay Krishna, Chapters 4 and 6

Paul Klemperer, "Why Every Economist Should Learn Some Auction Theory", in his *Auctions: Theory and Practice.* Princeton University Press, 2004. Available online at: http://www.gqq10.dial.pipex.com/

Methods Review II: Constrained Optimization, Expected Utility Theory

David Kreps, "Appendix 1: Constrained Optimization," *A Course in Microeconomic Theory*. (Distributed in class.)

David Autor, "Lecture: Uncertainty, Expected Utility and the Market for Risk," http://ocw.mit.edu/NR/rdonlyres/Economics/14-03Fall-2004/59500F7A-51BD-416B-81AB-E1499D683C9C/0/lecture11.pdf

The Principal-Agent Problem: A Benchmark Model

Macho-Stadler and Perez-Castrillo, Chapters 1 and 2

Moral Hazard

Macho-Stadler and Perez-Castrillo, Chapter 3

Methods Review III: Experimental Methods

Adverse Selection

Macho-Stadler and Perez-Castrillo, Chapter 4

Signalling

Macho-Stadler and Perez-Castrillo, Chapter 5