Games and Information
Econ 208, Fall 2006

Course Website: Instructors' websites (linked via their names below).

Instructors:

1st Third:	2nd Third:	3rd Third:
Navin Kartik	David Miller	Vincent Crawford
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Economics 322	Economics 228	Economics 319
Office Hours: TBA	Office Hours: TBA	Office Hours: TBA

Feel free to make an appointment with any of us by email for meetings outside office hours.

Description: This is an advanced Ph.D. course in game theory, intended both for students who are interested in producing research in microeconomic theory, and for those who would like to acquire a solid background in game theory to support their research in other areas such as applied work. The course will cover a combination of standard "textbook" results and some topics of current research. The first third of the course will review some basic ideas from Econ 200c and then extend the study of solution concepts in complete information and Bayesian games. The second third will focus attention on auctions, mechanism design, and repeated games. The last third of the course will study behavioral game theory.

Logistics: Meetings are twice a week, Monday and Wednesday, from 8.00-9.20am in Economics 300. Kartik will teach Sep. 25-Oct. 11; Miller will teach Oct. 16-Nov. 6; and Crawford will teach Nov. 8-Nov. 29.

Prerequisites: Econ 200a-c or permission from one of the instructors.

Assignments: There will be three mini-exams/long problem sets. Each will be a take-home exercise that you are expected to work on individually, i.e., without consulting any classmates, faculty (except us), etc. You can consult any non-human sources of your choice, however.

Grading: Your course grade is a uniformly weighted average of your performance on the three take-home exercises.

Satisfactory/Unsatisfactory grading. The minimum standard for a satisfactory grade is the same as the minimum standard for a B-minus grade.

Readings: There are two required textbooks for the course:

- ★ [CC] Camerer (2003), *Behavioral Game Theory: Experiments in Strategic Interaction*, Princeton University Press.
- ★ [FT] Fudenberg and Tirole (1991), *Game Theory*, MIT Press.

These will be supplemented by other material, including papers, as necessary.

Tentative Schedule of Topics:

Date	Topic	Reading
Sep. 25	Rationalizability, Nash and Bayesian Nash equilibrium, subgame perfection: review and advanced treatment	FT Chs. 1-3
Sep. 27	Information partitions and knowledge	FT Ch. 14
Oct. 2	Games of extensive form with incomplete information: perfect Bayesian equilibrium; sequential equilibrium; trembling hand perfection in extensive form; proper equilibria	FT Ch. 8
Oct. 4	Extensive form concepts continued	FT Ch. 8
Oct. 9	Evolutionary approaches to equilibrium*	Weibull pp. 33-55; KMR
Oct. 11	Spillover or some applications to bargaining, signaling, etc.	
Oct. 16	Repeated games: The folk theorem, dynamic programming	FT Chs. 4.3, 5.1-5.3
Oct. 18	Repeated games with hidden action & private information	FT Ch. 5.5-5.7
Oct. 20	*Rescheduled lecture, held 8:00-9:20 in Sequoyah 244* Reputation	FT Ch. 9
Oct. 23	No class	
Oct. 25	Mechanism design: Revelation principle, envelope theorem, ex post vs. Bayesian incentive compatibility	FT Ch. 5 and additional readings
Oct. 30	Mechanism design: Budget balance and individual rationality	
Nov. 1	Auctions: efficiency	
Nov. 5	Auctions: revenue and other concerns	
Nov. 8-Nov. 29	Behavioral game theory: see Crawford's webpage at http://www.econ.ucsd.edu/~vcrawfor/econ208Segment.html	CC and others

* The readings here refer respectively to Weibull (1995), *Evolutionary Game Theory*, MIT Press (Kartik will make the relevant pages available) and Kandori, Mailath, and Rob (1993), "Learning, Mutation, and Long-Run Equilibria in Games," Econometrica 61: 29-56.