

EC741, Spring 2001
Game Theory and Economics of Information
T, TH 1:30-3:30

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TEXT BOOKS

1. Gibbons, R., Game Theory for Applied Economists, Princeton University Press, 1992. (required)
2. Mas-Colell, A., M., Whinston and J. Green, Microeconomic Theory, Oxford University Press, 1995. (required)
3. Fudenberg, D., and J. Tirole, Game Theory, MIT Press, 1991. (recommended)

COURSE DESCRIPTION

This is a course in Game Theory and Economics of Information at the first year Ph.D. level. These two topics are closely related with each other. Lectures are mostly on Game Theory, but the last few lectures will cover adverse selection and moral hazard problems in Economics of Information.

There will be a midterm exam (30% of the course grade) and a final exam (60% of the course grade). The midterm exam will be given in the end of March (most likely on March 29: will be announced), and the final exam will be given on May 8. Problem sets will be handed out periodically. This will count total 10% of the course grade.

TENTATIVE SCHEDULE OF THE COURSE

The schedule may change

1. Static Games of Complete Information
 - (a) Readings: Gibbons Chapter 1.
 - (b) Topics: Normal Form Game, (Iterated) Strict Dominance, Nash Equilibrium, Mixed Strategies, Existence of Equilibrium
 - (c) 2/27, 3/1, 3/13
2. Dynamic Games of Complete Information
 - (a) Readings: Gibbons Chapter 2.
 - (b) Topics: Extensive Form Games, Backward Induction, Subgame Perfect Equilibrium, Finitely Repeated Games, Infinitely Repeated Games, The Folk Theorem
 - (c) 3/15, 3/20, 3/22, 3/27
3. Static Games of Incomplete Information
 - (a) Readings: Gibbons Chapter 3.
 - (b) Topics: Bayesian Games, Bayesian Nash Equilibrium, The Revelation Principle
 - (c) 4/3, 4/5, 4/10
4. Dynamic Games of Incomplete Information
 - (a) Readings: Gibbons Chapter 4.
 - (b) Topics: Perfect Bayesian Equilibrium, Signalling Games, Pooling and Separating Equilibria, The Intuitive Criterion

(c) 4/12, 4/17, 4/24

5. Economics of Information

(a) Readings: Mas-Colell, Whinston and Green Chapters 13 and 14.

(b) Topics: Adverse Selection, Moral Hazard

(c) 4/26, 5/1