

Core Microeconomics III: Games and Information
Econ 200C, Spring 2006

Course Website: <http://webct.ucsd.edu>

Instructors:

1st Half:

Navin Kartik
nkartik@ucsd.edu
Economics 322

2nd Half:

David Miller
d9miller@ucsd.edu
Economics 228

Office Hours: Tue 4.00-5.30pm

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Teaching Assistant:

Ricardo Serrano-Padial
riserranopadial@ucsd.edu
Economics 128

Office Hours: Thurs 12.00-1.30pm

Review Session: Fri 10.00-11.30am (in Econ 300)

Feel free to make an appointment with any of us by email at any time.

Description: This is the third and last part of the graduate microeconomics core sequence. It provides an introduction to noncooperative game theory, which is a methodology to analyze the interaction of agents in strategic situations. We develop the theory at an abstract level, but apply it to imperfect competition, the provision of public goods, signaling of private information, auctions, and mechanism design.

Logistics: Lectures are twice a week, Monday and Wednesday, from 9.00-10.50am in Economics 300. Note that we do not meet on May 29 due to Memorial Day.

Prerequisites: There are no formal prerequisites to this course, although a basic background in math is necessary (in particular, we will use multivariate optimization, some linear algebra, and a little real analysis). You will also find various examples we discuss more illuminating if you have taken at least an intermediate microeconomics course.

Assignments: We will assign problem sets regularly. You are encouraged to work with your classmates in solving them, but each of you must write up and turn in your own answers. Solutions to the problems will be posted on the course website.

Grading: Your course grade is a weighted average of your performance on the problem sets (20%) and a Final exam (80%). The Final will be held during exam week.

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

Readings: We recommend that you concentrate your reading on our lectures notes that are available from the course website. The closest textbook treatment is:

- ★ Mas-Colell, Whinston, and Green (1995), *Microeconomic Theory* [MWG]

Lectures will follow their development reasonably closely. There are other well-known graduate level books you can also consult, such as:

- Kreps (1990), *A Course in Microeconomic Theory*
- Varian (1992, Third Edition), *Microeconomic Analysis*
- Fudenberg and Tirole (1991), *Game Theory*

Kreps is relatively chatty and has good intuition; Varian is very concise but often insufficient for our purposes; Fudenberg and Tirole is a more advanced treatment.

If you would like to look at an (advanced) undergraduate level treatment, a good source is:

- Watson (2001), *Strategy: An Introduction to Game Theory*

Order of Topics:

- 1. Introduction.** MWG Chapter 7.
- 2. Simultaneous-Move (Static) Games.** MWG Chapter 8.
- 3. Sequential-Move (Dynamic) Games.** MWG Chapter 9.
- 4. Adverse Selection, Signaling and Screening.** MWG Chapter 13.
- 5. Imperfect Competition.** MWG Chapter 12.
- 6. The Principal-Agent Problem.** MWG Chapter 14.
- 7. Mechanism Design and Implementation.** MWG Chapter 23.