

**Core Microeconomics III: Games and Information**  
**Econ 200C, Spring 2005**

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

**Instructors:**

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Economics 228

Office Hours: Tue 10.00am–11.00am

Office Hours: Fri 10:30am–11:30am

Feel free to make an appointment with either 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 9.30-11.20a.m in Economics 300. Note that we do not meet on May 30 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.

**Readings:** The primary textbook for the course is:

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

Lectures will follow their development reasonably closely. There are other well-known 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.

### **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.