

# Collegio Carlo Alberto

## Allievi Program

### Microeconomics II Spring 2008

Instructor: Esteban Jaimovich

#### Contact Information

Collegio Carlo Alberto  
Camerata I  
Office n° 7

Phone: 011-6705055  
E-mail: [esteban.jaimovich\\_at\\_carloalberto.org](mailto:esteban.jaimovich_at_carloalberto.org)  
<http://www.carloalberto.org/people/jaimovich/>

Class Hours: TBA

Office Hours: Twice a week, days/times TBA.

#### Course Description

This class continues the study of Microeconomics started in the first semester. Strategic interactions are pervasive in economic applications, and the course introduces students to Game Theory, a fundamental topic in theoretical economics that provides a unified framework for the analysis of strategic behavior. The second part of the course presents some classic applications of Game Theory to Information Economics.

#### Grading

Problem sets (20%), midterm written exam (30%) and final written exam (50%).

### TOPICS

#### Part I: Game Theory

1. Static Games with Complete Information
  - a. Strict and Weak Strategic Dominance.
  - b. Nash Equilibrium.
  - c. Applications to the Oligopoly Theory.
  - d. Mixed Strategies
2. Extensive Games with Complete Information
  - a. Backwards induction.
  - b. Sub-game Perfect Nash Equilibrium.
  - c. Repeated Games, Reputation.
  - d. Bargaining Games.
3. Static Bayesian Games
  - a. Bayesian Nash Equilibrium.
  - b. Applications to Auctions.

## **Part II: Economics of Information**

1. Introduction
  - a. Review of the Theory of Choice under Uncertainty
  - b. Types of Asymmetric Information
2. Moral Hazard
  - a. The Basic Principal-Agent Model
  - b. Unobservable Effort
  - c. Applications: *i*) incentives for managers, *ii*) credit rationing
3. Adverse Selection
  - a. The two-type case
  - b. Applications: *i*) insurance markets, *ii*) market for “lemons”
4. Signalling and Screening: Education as a Signal

### **Bibliography for Part I**

- For topics 1 and 2: Osborne and Rubinstein, *A Course in Game Theory*. MIT Press. 1994.
- For topic 3: Robert Gibbons, *A Primer in Game Theory*. Princeton University Press. 1992.

### **Bibliography for Part II**

- For topics 1, 2 and 3: Macho-Stadler and Perez Castillo, “An Introduction to the Economics of Information”. Oxford University Press. 2001. 2<sup>nd</sup> edition.
- For topic 4: Mas-Collel, Whinston and Green, “Microeconomic Theory”. Oxford University Press. 1995.

Note: The syllabus and the bibliography are preliminary and might change substantially before the course starts in March 2008.