Class Time: Tuesday 14:00 - 16:00 and Thursday 18:00 - 20:00

Office Hours: by appointment (dino.gerardi@carloalberto.org)

Grades
The grades will be determined as follows: midterm 40%, final exam 60%. There will be problem sets about once a week. The midterm will be on Thursday, March 25th.

Course Textbooks

- Martin J. Osborne: An Introduction to Game Theory, Oxford University Press.
- Roger B. Myerson: Game Theory, Harvard University Press.
- Mas-Collel, Whinston and Green: Microeconomic Theory, Oxford University Press.
The course will provide a mathematical treatment of choice under uncertainty and game theory. We will develop and solve formal models of strategic interactions among economic agents. We will consider several economic applications, such as imperfect competition, auctions, public goods and bargaining.

I. Introduction.

II. Decision Theory.
Dominance, beliefs and “Never Weak Best Response” strategies.

III. Strategic Form Games
Dominance, Nash equilibrium, mixed strategies.

IV. Extensive Form Games
Corresponding strategic forms, behavioral strategies, backwards induction, subgame perfect equilibrium.

V. Games of Incomplete Information
Normal-form representation of static games of incomplete information, Bayesian Nash equilibrium, perfect Bayesian equilibrium.

VI. Repeated Games
Folk theorems.

VII. Mechanism Design
Design of the optimal auction, the revenue equivalence theorem.