

Economic Analysis I. Game Theory
Columbia Business School B8207-002
SPRING 2010

Instructor: Emanuele Gerratana. E-mail: eg198@columbia.edu

Office Hours: By appointment

Lectures

1. Monday 01/25 2:30-5:30pm
2. Monday 02/1 2:30-5:30pm
3. Monday 02/08 2:30-5:30pm
4. Monday 02/15 2:30-5:30pm
5. Friday 02/19 TBA
6. Monday 02/22 2:30-5:30pm

Learning Material and Textbooks: The required textbook is: *An Introduction to Game Theory*, Martin J. Osborne, Oxford University Press 2004. Alternatively, or as supplementary material you can find useful the following texts:

Same level as Osborne's book:

Strategies and Games, P. Dutta, MIT Press.

Strategy, J. Watson, Norton.

A Primer in Game Theory R. Gibbons

At a more advanced level than Osborne's book:

Game Theory. Analysis of Conflict, R.B. Myerson, Harvard University Press.

A Course in Game Theory, M.J. Osborne and A. Rubinstein

Game Theory, D. Fudenberg and J. Tirole

Course Description: This course is an introduction to Game Theory. It aims to provide a systematic introduction to the tools of game theory and some of its applications.

Game Theory analyzes situations in which two or more individuals (or firms, political parties, etc.) interact in a strategic manner. Game theoretical models have been applied to many disciplines including economics, finance, law, political science and sociology.

Grading:

Problem Sets and Participation	20%
Exam	80%

Course Outline

1. Strategic Form Games. Nash Equilibrium: Theory. (Osborne, chapter 2)
2. Nash Equilibrium: Applications. (Osborne, chapter 3)
3. Extensive Form Games: Theory. (Osborne, chapter 5)
4. Extensive Form Games: Applications. (Osborne, chapter 6 and 7)
5. Mixed Strategy Equilibrium. (Osborne, chapter 4)
6. Games with Incomplete Information and Bayesian Equilibrium. Auctions (Osborne, chapter 9)
7. Repeated Games. (Osborne, chapter 14)