

**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:

- *A Primer in Game Theory* R. Gibbons

At a more advanced level than Osborne’s book:

- *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:

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Problem Sets and Participation</td>
<td>20%</td>
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<tr>
<td>Exam</td>
<td>80%</td>
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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)