

## ECON0027 Game Theory Syllabus

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**Textbook:** An Introduction To Game Theory *by Martin J. Osborne*, Oxford University Press

### COURSE DESCRIPTION:

This course introduces models of strategic situations that involve agents with opposed interests. The aim of this course is to provide students with an intellectual framework to analyze situations in which the behavior of agents is driven by strategic considerations and, with a set of analytical tools, to interpret a wide range of phenomena in the social sciences.

Most of the course focuses on non-cooperative game theory. The major topics covered are strategic form games, extensive form games, Bayesian games, repeated games and an overview of cooperative models and matching markets.

### TOPICS:

1) Games in normal form

*Chapters from Osborne's book: 2, 3, 12*

2) Games in extensive form

*Chapters from Osborne's book: 5, 6, 7*

3) Repeated games

*Chapters from Osborne's book: 14.1-14.6*

4) Bayesian games

*Chapters from Osborne's book: 9, 10*

5) Incentive compatibility, auctions and mechanism design

*Optional reading: "Microeconomic Theory", by Mas-Colell, Whinston, Green, Chapter 23*

6) Cooperative game theory and two-sided matching

*Chapters from Osborne's book: 8*

### ASSESSMENT:

There are two elements included in the final assessment for this module:

- Group home assignments account for 25% of the final grade;
- Final exam accounts for 75% of the final grade.