

Econ 3014: Game Theory

Lecturer information

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Office hours: Wednesdays 10am-11am (term 1), by appointment (terms 2&3)

What will you learn about?

This course introduces models of strategic situations that involve agents with opposed interests. Most of the course focuses on non-cooperative game theory. The major topics covered are strategic form games, extensive form games, Bayesian games, mechanism design, and repeated games. The last lecture provides an overview of cooperative models and matching markets.

What will you know (better) by the end of the course?

The aim of this course is to provide students with an intellectual framework to analyse situations in which the behaviour 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.

What topics are covered?

Weeks 1-2: Games in normal form. *Chapters from Osborne's book: 2, 3, 12*

Week 3: Games in extensive form. *Chapters from Osborne's book: 5, 6, 7*

Week 4: Repeated games. *Chapters from Osborne's book: 14.1-14.6*

Weeks 5-7: Bayesian games. *Chapters from Osborne's book: 9, 10*

Week 8: Incentive compatibility, auctions and mechanism design. *Optional reading: "Microeconomic Theory", by Mas-Colell, Whinston, Green, Chapter 23*

Weeks 9-10: Cooperative game theory and two-sided matching. *Chapters from Osborne's book: 8*

Is this course right for you?

The course does not have pre-requisites.

How do you learn on this course?

- Contact hours: lectures, practicals and tutorials; lectures and practicals are recorded using Lecturecast.

- Five problem sets; four of them are graded to provide students with information about their current performance.

Readings

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

[This book comes in several editions including the international one. All of them are equally suitable for the course]

Assessment

The mark for the course is determined by the final exam (100%). The problem set marks do not count towards the final mark for the course.