

**MATH2370 Theory of games**

[22.5h] 2 credits

This course is taught in the 1st semester

Teacher(s): Jean-François Mertens
Language: French
Level: Second cycle

Aims

Introduction to the mathematical theory of games.

Main themes

The course aims to introduce the basic concepts and mathematical techniques in game theory. In order to do so, a first part will be for non-cooperative theory (extensive form and normal form, minimax and Nash theorems, balance concept critic). A second part will introduce to the methodology and to the concepts of the cooperative theory, including a few typical applications like problems of allocation of costs and election games. A last part will go towards more advanced questions, going along with the auditorium's interests.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

References: Guillermo Owen, Game theory, second edition, Academic Press, 1982; Jurgen Eichberger, Game theory for Economists, Academic Press, 1993.

Other credits in programs

MATH22/G Deuxième licence en sciences mathématiques (2 credits)