

Game theory

ECTS : 5

Volume horaire : 36

Description du contenu de l'enseignement :

Volume horaire :

CM : 18h

TD : 18h

We study some basic models and results on non-cooperative game theory. The course is divided in five parts:

1. Introduction to game theory: Notations and basic concepts
2. Zero-sum games: Theorem of Von Neumann
3. Nash equilibrium, their existence and mixed strategies; Nash's Theorem
4. Combinatorial Games, Game trees, Zermelo's Theorem
5. Topology: Sperner's Lemma and Applications

Compétence à acquérir :

The student will know important concepts of game theory, and learn how to solve problems and prove theorems: Nash Equilibrium, Von Neumann's Theorem, Zermelo's Theorem, Combinatorial games, etc.

Mode de contrôle des connaissances :

CC (midterm) + Final Exam

Bibliographie, lectures recommandées :

Two references: 1) Game Theory, Tadelis 2) Game theory: playful introduction, DeVos, Kent

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