Game theory and Mechanism design

ECTS : 4

Enseignant responsable : Stephane AIRIAU (https://www.lamsade.dauphine.fr/~airiau/)

Langue du cours : Français

Volume horaire : 39

Description du contenu de l'enseignement :

This course provides an introduction to Game Theory and Mechanism design, with computational considerations.

- simultaneous games (dominant strategy equilibrium, Nash equilibrium in pure and mixed strategy, examples, zero-sum games, potential games)
- sequential games (sub game perfect equilibrium, repeated games)
- Auctions
- Mechanism Design (VCG mechanism)
- Algorithmic Mechanism Design
- Online Advertising markets
- If time allows: additional topics may include combinatorial auctions, matching markets, prediction markets

Compétences à acquérir :

- How to analyse a system where incentives matter
- Analyse or design solutions that are computationally feasible

Mode de contrôle des connaissances :

2024-2025 exam only

Bibliographie, lectures recommandées :

Algorithmic Economics: A Design Approach by David Parkes and Sven Seuken (draft 2024)