

## 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: Mixed extension of finite games and their value
3. N-player games: Nash equilibrium, their existence and complexity
4. Potential games: Congestion games and price of anarchy
5. Repeated games: Uniform games and the Folk theorem

### **Compétence à acquérir :**

The student will know the basic concepts on non-cooperative game theory.