

Topics in Game theory*

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Sala Pietra, ex Ospedale Militare

Game Theory uses mathematical models to study and analyse strategic interactions between economic agents. This course is designed to provide an understanding of the fundamental concepts in game theory as applied to economics.

Learning Outcomes

Upon completion of the course students should:

- be able to write down the extensive form or normal form representations for simple games
- become familiar with basic equilibrium concepts
- be able to find the equilibrium outcomes of simple games

Course Delivery

The course will be delivered through a two-hours lectures. Specific learning outcomes and prescribed reading and exercises are provided for each lecture of the course. I will be available for consultation during advertised office hours or by appointment.

1. Introduction to preferences, utility functions and expected utility theory (2 hours)
2. Introduction to game theory and representation of the games: (2 hours)
 - a. Extensive form
 - b. Normal form
3. Equilibrium concepts for Statics games:
 - a. Nash equilibrium (2 hours)
 - b. Bayes equilibrium (2 hours)
4. Dynamics games:
 - a. Subgame perfect Nash equilibrium (2 hours)
 - b. Perfect Bayesian Equilibrium (2 hours)
5. Behavioral game theory: ten treasures and then contradictions (eventually, 2 hours)

Reading

The main text for this course is:

Robert Gibbons, *A Primer in Game Theory*, Harvester Wheatsheaf 1992.

Additional readings will be assigned from time to time. They are an integral part of the class and you are expected to read them.

* *il corso si terrà in lingua inglese*