



Academic Year
Syllabus
Game Theory
CFU 6
Prof. Bruno Chiarini

Course Description

The course is an introduction to game theory. The criterion of dominance and the equilibrium of Nash will be analysed with pure strategies and mixed strategies, as well as different refinements of the equilibrium (Backwards Induction, subgame perfect Nash equilibrium). An introduction to Bayesian equilibrium and repeated games will also be provided. The lessons use several examples in the field of economics, politics and economic policy.

Duration, Timetable and Period of the Course

The course consists of 14 lessons (on 10 topics) of 3 hours each during the period April 27 to May 27. The days concerned are Monday-Tuesday-Wednesday. Students are asked to always be present at lessons in order to avoid delays and repetitions.

Teaching Method

Lectures will make use of oral presentations. Analysis will also be presented at the board, and used for open discussion. Interaction between teacher and student will be encouraged.

Schedule of Topics

Topic 1	Normal form and Extensive form
Topic 2	Strategy dominance and Nash Equilibrium
Topic 3	Complete Information (perfect and imperfect)
Topic 4	Mixed strategies and equilibrium interpretation
Topic 5	Coordination problem (prisoner dilemma; stag hunt; chicken game...)
Topic 6	Public goods and free-riding phenomenon
Topic 7	Backward induction and subgame perfection
Topic 8	Games of incomplete information Bayesian equilibrium
Topic 9	Cournot with Complete and Incomplete information
Topic 10	Repeated Games

Textbook and Materials

The teacher will refer the student, by the end of each week, to the relevant material on the basis of the above topics:

Pdf lessons of the teacher, downloadable.

One of the following volumes:

- Gibbons A. Primer in Game Theory, Prentice Hall
- Osborne M. Introduction to Game Theory: International Edition, OUP Oxford

Assessment

If the students are always present at the lessons, it will be possible to take a mid-course test, valid for the final evaluation.

Non attending students will have to perform the same written exam on the whole program.

Final written examination (60 minutes) on the following dates:

- June 8, 2020
- June 19, 2020
- September 11, 2020

Office hours

By appointment: bchiarini56@gmail.com . You can usually talk to the teacher after class.

E-mail

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