

PRESENTATION

GAME THEORY

Goals

- In this course we will introduce some basic ideas about Game Theory as well as different types of games.
- We will study the main equilibrium concepts (Nash, subgame perfect and Bayesian equilibria).
- The theory will be illustrated with economic applications: non competitive markets, political competition, bilateral negotiations, auctions, voting systems and market cooperation.

Program

- Three parts
 - Static Games
 - 4 weeks
 - Dynamic Games
 - 4-5 weeks
 - Repeated and Bayesian Games
 - 4 weeks

Evaluation I

- In the “convocatoria ordinaria” (December/January) the final grade is based on a final exam (60%). The remaining 40% of the grade is allocated based on class performance.
- The final exam is the same for all groups and will cover all the program.
- Class Grade: 40%.
 - 50% quizzes.
 - Two-Three quizzes.
 - A quiz consists of several questions and problems from the exercise list
 - 25% Exercises (public class presentation).
 - 25% Magistral class grade.
- In the “convocatoria extraordinaria” (June) the final grade is calculated as in the “convocatoria ordinaria” or just with the final exam, whichever is more favorable to the student.

Evaluation II

- During the reduced class, 4 or 5 students will be randomly chosen within the class list to present publicly the solution of one problem each.
- In each class any student can be chosen regardless of how many times they have already presented.
- The random process will guarantee that each student will be chosen 2 or 3 times (depending on the group).



Evaluation III

- In the magistral classes, there will be different activities to be completed for the magistral class grade.
- These activities will be specific to each group.



Practical Aspects I

- Reduced classes will be used to work on the exercises lists. All theoretical questions will be addressed in the magistral class and during office hours.
- The final exam will include questions related to the material covered in the magistral class.
- Each class in reduced groups is the continuation of a magistral.
- Some course material will be posted on line.

Practical Aspects II

- Problem Sets: web page and aula global:

http://www.eco.uc3m.es/docencia/new_juegos/en_home.html

- Office hours: to be announced by each professor.

Practical Aspects III

- BASIC REFERENCES:
 - GARDNER, R. Games for Business and Economics. Wiley, 2003.
 - GIBBONS, R. A Primer in Game Theory. Pearson, 1992.
- COMPLEMENTARY REFERENCES:
 - BINMORE, K. Fun and Games. McGraw-Hill, 1994.
 - DIXIT, A y NALEBUFF, B. Thinking strategically. Norton, 1991
 - VEGA, F. Game Theory and Economic Applications. Cambridge University Press, 2001.
 - FERREIRA, J. L. Game Theory. An Applied Introduction. Macmillan International, Red Globe Press 2020.