Game Theory

Academic Year: (2022 / 2023) **Review date: 28-06-2021**

Department assigned to the subject: Economics Department

Coordinating teacher: MARHUENDA HURTADO, FRANCISCO

Type: Electives ECTS Credits : 6.0

Year : 1 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Basic calculus and probability theory

OBJECTIVES

- Teaches students the standards of precision and rigor in economic analysis and professional communication.
- Emphasizes autonomous and group learning.
- Familiarizes students with the theory of individual decision under uncertainty, and provides a set of tools appropriate for the analysis of individuals' interactions in strategic settings.

DESCRIPTION OF CONTENTS: PROGRAMME

1 What is game theory? Normal form games
2 Extensive form games
3 Applications
4 Repeated games
5 Static games of incomplete information
6 Dynamic games of incomplete information

LEARNING ACTIVITIES AND METHODOLOGY

-Lectures in which the basic material is presented and discussed. Basic textbook references are provided with to complete and deepen students¿ understanding.
- Discussion of the solution to practical exercises to provide students with feedback on their level of understanding and difficulties.

ASSESSMENT SYSTEM

- Quizzes (20%)
- Midterm (40%);
- Final exam (40%).

% end-of-term-examination:	40
% of continuous assessment (assigments, laboratory, practicals…):	60

BASIC BIBLIOGRAPHY

- A. Dixit and S. Skeath Games of Strategy, New York: W. W. Norton, 1999
- E. Prisner Game Theory Through Examples, The Mathematical Association of America, 2014
- H. Gintis and S. Schecter Game Theory in Action. An Introduction to Classical and Evolutionary Models, Princeton UP, 2016
- H. S. Bierman and L. Fernandez Game Theory with Economic Applications, Second Edition, Addison-Wesley, 1998
- K. Binmore Game theory: A Very Short Introduction, Oxford UP, 2007
- Lindley Making Decisions, , John Wiley & Sons, 1985
- M. Osborne An Introduction to Game Theory, Oxford UP, 2003
- M. Peterson An Introduction to Decision Theory, Cambridge UP, 2009
- R Gardner: Games for Business and Economics, New York: John Wiley & Sons, 1995

- R. Gibbons Game Theory for Applied Economists, Princeton UP, 1992
- R. Myerson: Game Theory: Analysis of Conflict, , Harvard UP, 1991

ADDITIONAL BIBLIOGRAPHY

- Sanchez Cuenca, Ignacio Teori¿a de Juegos, Centro de Investigaciones Sociolo¿gicas, 2004
- Tadelis, S Game Theory, An Introduction, Princeton University Press.