Cooperation, collective action and formal models of strategy

Academic Year: (2023 / 2024) **Review date: 22-11-2022**

Department assigned to the subject: Social Sciences Department

Coordinating teacher: SANCHEZ-CUENCA RODRIGUEZ, IGNACIO

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 1

OBJECTIVES

LEARNING RESULTS

· Knowledge of formal models of strategic behaviour, basic notions of utility theory, games in normal and extensive form and models of negotiation and collective action.

· Understand how formal models can be used to analyse complex phenomena and know their main applications to collective action problems and cooperation, conflict, international crisis, dissuasion and market solutions.

DESCRIPTION OF CONTENTS: PROGRAMME

1. First week: What type of science is game theory?

2. Second week: Two approaches to social phenomena.

Diagnostic test of math skills

3. Third week: Rationality and Society; Math review.

4. Fourth week: Basic Concepts of Game Theory

5. Fifth week: Nash Equilibrium

6. Sixth week: Calculating Nash Equilibria.

7. Seventh week: Multiplicity of Equilibria.

8. Eighth week: Comparative Statics.

9. Ninth week: Tipping Games.

10. Tenth week: Subgame Perfect Equilibrium.

11. Eleventh week: Repeated Games.

12. Twelfth week: Folk Theorems.

13. Thirteenth week: Sustained Cooperation.

14. Fourteenth week: Norms and Institutions.

ASSESSMENT SYSTEM

There will be four quizzes during the course, each of them worth 10% of the final grade. In addition, students will submit to group essays, each of them worth 20% of the final grade. The remaining 20% will be graded based on class participation.

% end-of-term-examination:	20
% of continuous assessment (assigments, laboratory, practicals…):	80

BASIC BIBLIOGRAPHY

- Martin Osborne An Introduction to Game Theory, Oxford University Press, 2004
- Morrow, James Game Theory for Political Scientists, University of Michigan Press, 1994
- Ordeshook, Peter A Political Theory Primer, Routledge, 1992