



**FACULTY OF ECONOMICS AND BUSINESS
ACADEMIC ECONOMICS PROGRAM**

I. INFORMATIVE DATA

Subject	GAME THEORY
Initials	E1JYC1
Section	A
N° credits	5.0
Semester	2016-II
Professor	Martínez-Carrasco, Miguel.

II. DESCRIPTION

The purpose of microeconomics is to model economic activity as a cumulative of decisions of the economics agent that follow their private interests under limited resources. As such, it studies the economic behavior of consumers, workers, investors, firms, managers and any other person or entity that has a role in the economy.

However, many of the agent's decisions influence not only his own utility but also the utility of other agents. Game theory is a set of mathematical instruments used to study multiagent decision problems. In each game, the payoff that each player receives depends on their own actions and also on the other players' actions. Thus, the objective of each player is to maximize their utility given the possible reactions of the other players.

Furthermore, many interactions between agents are carried out under conditions of asymmetric information, that is, at the beginning of the game one of the agents does not have complete information on any feature of the relationship, or knows he cannot observe the actions of another agent. This is a characteristic of contractual relations, and therefore is known as theory of contracts.

III. OBJETIVES

1. Learn basic concepts of risk and uncertainty.
2. Learn basic concepts of game theory.
3. Learn basic theory of contracts.

IV. TOPICS

Unit 1: Risk and Uncertainty

N°	Topic	Textbook
1	Probabilities and Lotteries	Mas-Colell, A., Whinston, M. D., & Green, J. (1995). <i>Microeconomic theory</i> (Vol. 1). New York: Oxford University press. Chapters 1 and 6.
2	Expected utility	
3	Attitude to risk	
4	Prospect Theory	

Unit 2: Game Theory

N°	Topic	Textbook
1	Strategies Games	Osborne, M. J. (2004). <i>An introduction to game theory</i> (Vol. 3, No. 3). New York: Oxford University Press. Chapters 2, 3, 4, 6 8, 11 and 12.
2	Extensive Games	
3	Mixed Strategy	
4	Repeated Games	
5	Bayesian Games	

Unit 3: Theory of Contracts

N°	Topic	Textbook
1	Adverse Selection	Salanié, B. (2005). <i>The economics of contracts: a primer</i> . MIT press. Chapters 2, 3, 4 and 5.
2	Signaling Models	
3	Moral Hazard	

V. METHODOLOGICAL STRATEGIES

1. Debate
2. Discussion of the teaching assistant
3. Discussion of the professor

VI. GRADING

Coursework will be weighted as follows:

Quizzes:	33.3%
Midterm Exam:	33.3%
Final Exam:	33.3%

There will be four (4) quizzes. One of these, the lowest score will be removed and the simple average of the three (3) remaining quizzes will be taken. The student only approve the course if the final average is greater than or equal to 10.50.