



Universidad de
La Sabana

SUBJECT SYLLABUS

ACADEMIC OVERVIEW INTERNATIONAL SCHOOL OF ECONOMIC & ADMINISTRATIVE SCIENCES

SUBJECT NAME AND CODE: GAME THEORY (2865SDETJ)

LEVEL OF STUDY: Undergraduate Program

GENERAL ACADEMIC INFORMATION	
LATEST UPDATE	2018-1
ACADEMIC AREA	Economy
SUBJECT TYPE	Elective
CREDIT POINTS	4
CLASSROOM HOURS PER WEEK	4
PRE-REQUISITES	Microeconomic II
LANGUAGE	English
INTERNATIONAL CONTENT	<ul style="list-style-type: none">• Reading materials include international journal articles• Reading materials in English• International bibliography is used
COURSE DETAILS	
COURSE DESCRIPTION	<p>The objective of the course is that students learn to recognize, model and analyze simple conflict situations through the methodological approach of game theory. The first part of the course is about competitive game analysis while the second makes a brief introduction to cooperative games. We use several economics examples to give an insight about the usefulness of game theory in this area.</p>
COMPETENCES DEVELOPED	<p>C1 – Understand the basic concepts of the theory of non-cooperative games, in particular the importance of the so-called Nash equilibrium and its applications in economics. (Énfasis: Conocimiento, ILO: ILO 02, EFI ILO06)</p> <p>C2 – Learn the basic notions of cooperative games and their application to negotiation problems and auctions. (Énfasis: Conocimiento, ILO: ILO 02, EFI ILO06)</p> <p>C3 - Apply game theory concepts to give an appropriate solution</p>

	to practical problems and exercises given in class . (Énfasis: Habilidad / Actitud, ILO: ILO 02, EFI ILO06, EFI ILO07)
COURSE CONTENTS	<p>The exposition and analysis of fundamental aspects of each topic regarding the proposed lectures will be given on classes. However, students should read the lectures in advance to ease the exposition in the class.</p> <p>To reach the objectives and to develop the expected abilities, an active participation in class is a must. In particular, the following items are important:</p> <ul style="list-style-type: none"> • Reading lectures proposed in the syllabus before the respective week. • Deliver all homework's proposed by the teacher.
ASSESSMENT	<p>The final grade will be a weighted average of the following aspects: First exam 25% Midterm 25% Final exam 25% Homework 25%</p> <p>The first exam covers the topics of the first part of the course. The midterm covers the contents of the second part of the course. The final exam covers the final part of the course. The homework grade is a weighted average of the assignments, class exercises and quizzes carried out during the academic period.</p> <p>As part of the evaluation process, the following will be considered:</p> <ul style="list-style-type: none"> • Written exam. The teacher can use methods in the exam such as: Problem based analysis and study cases. Competences developed: C1, C2, C3, • Assignments: The teacher can use methods such as: collaborative learning, Problem based analysis and study cases. Competences develop: C1, C2, C3 <p>To present a quiz or an assignment in a date different from those given by the teacher, the student should give a valid excuse. The latter refers to a medical excuse or a domestic calamity. In all cases, the student should have a physical support of the excuse.</p> <p>Grade complaints (of homework's or anything else) can only be made between the next eight working days following the delivery of the grade to the student. After this period, I will not accept any complain. On the other hand, complains regarding the grade of an exam should be made the same day in which the exam is given to the student, all students should assist to class this day.</p> <p>Students who can't present an exam have the right to an exam</p>

	extension that will be made the week following the original date of the exam. This extension will be made only if the student has a permission given by the Academic success coordination.		
WEEKLY PLAN	WEEK	TOPIC	LECTURES
	1	Introduction to game theory	Introduction [OM] Chapter 1 [BK]
	2-4	Static games with perfect information	Chapter 2-3 [OM] Chapter 2-5[BK]
	5	Mixed strategies	Chapter 6 [BK] Chapter 4 [OM]
	Exam I		
	6-7	Application to economics	Chapter 9-10 [BK] Chapter 5-6-7[OM] (Selectivo)
	8-9	Repeated Games	Chapter 11[BK] Chapter 14 [OM]
	10-12	Bayesian games and Signalling	Chapter 12-13 [BK] Chapter 10 [OM]
	Midterm		
	13-14	Coalitional Games	Chapter 16 [BK] Chapter 8 [OM]
	15-16	Cooperative Games	Chapter 18 [BK]
	Final Exam		
BIBLIOGRAPHY	<p>BK1] Binmore, K. (1991) <i>Fun and Games: A Text on Game Theory</i>, 1st edition, DC Heath & Co.</p> <p>[BK] Binmore, K. (2007) <i>Playing for Real: A Text on Game Theory</i>, 1st edition, Oxford University Press.</p> <p>[RA] Osborne, M. & Rubinstein, A. (1994) <i>A Course in Game Theory</i>, 1st edition, MIT Press.</p> <p>[OM] Osborne, M. (2003) <i>An Introduction to Game Theory</i>, 1st edition, OUP USA.</p>		