BASIC DETAILS:

Subject:	BUSINESS WORKSHOP I		
Id.:	32797		
Programme:	DOBLE GRADO EN ADMON. Y DIRECCIÓN DE EMPRESAS Y GRADO EN DERECHO		
Module:	MÓDULO TRANSVERSAL		
Subject type:	OBLIGATORIA		
Year:	2	**Teaching period:**	Primer Cuatrimestre
Credits:	6	**Total hours:**	150
Classroom activities:	64	**Individual study:**	86
Main teaching language:	Inglés	**Secondary teaching language:**	Castellano
Lecturer:		**Email:**	

PRESENTATION:

The subject Game Theory aims to study the behaviour of individual agents when their utility depends not only on their own actions, but also on the actions of the other agents in the game. This subject studies the possible combinations and outcomes that may happen in any of these games when the agents act rationally and predictably.

One of the main targets of this course will be to understand that the Game Theory has multiple applications, and has been used in making business, economic, political and even military decisions. It is a very useful tool when we try to understand the human behaviour.

Students will have to understand the value of Game Theory, being able to solve the problems and the cases, and to create new ones using the tools provided by this subject. In sum, they will have to demonstrate knowledge of Game Theory, as well as of its tools.

Finally, we will made an introduction of Behavioural Economics theory and how our decisions are affected by social and psychological influences, as well as a rational calculation. We will play games demostrating how irrational can become given specific circunstances.

PROFESSIONAL COMPETENCES ACQUIRED IN THE SUBJECT:

General programme competences	G01	Ability to analyse and summarise information from several sources.
	G02	Creative and efficient resolution of problems that arise in day-to-day, in order to ensure the highest levels of quality of professional work.
	G03	Ability to organise and plan the work in the context of continuous improvement
	G04	Use of information and communication technologies
	G05	Ability to work effectively in interdisciplinary teams, integrating and participating in scientific and professional teamwork, contributing ideas and respecting and valuing the diversity of views of other team members.
	G06	Ability to incorporate ethical principles into the professional culture, giving priority to ethical commitment to customers and society.
	G07	Ability to work in an international context and innovate and adopt new approaches used in other national contexts.
	G08	Oral and written communication in Spanish.
	G09	Oral and written communication in English in academic and professional contexts.
	G10	Ability to apply the acquired knowledge, adapting it to the needs and special features of each situation and person.
	G11	Ability to come up with new ideas (creativity).
	G12	Ability to incorporate scientific research and evidence-based practice as a professional culture, updating knowledge and skills continuously.
	G13	Ability to develop learning strategies throughout life to be able to acquire new knowledge, by developing their own academic and professional path.
	G14	Oral and written communication in native language and in English, according to the needs of their field of study and the demands of their academic and professional environment.
	G15	Ability to establish and meet the most appropriate quality criteria and apply methodologies and work

		strategies geared towards continuous improvement.
	G16	Ability to assimilate concepts of a social and humanistic nature into a comprehensive university education to enable the development of ethical values such as solidarity, multiculturalism, equality, commitment, respect, diversity, integrity, etc.
	G17	Ability to create, from a critical and constructive point of view, proposals for social transformation based on democracy and fundamental rights of individuals.
Specific programme competences	E01	Understand the specific aspects of the operation, management and control of the different functional areas of the company.
	E02	Know and understand the local, national and international socio-economic context in which the companies operate and be able to interpret its impact on them.
	E03	Ability to apply the acquired knowledge of the functional areas of the company and the socio-economic environment.
	E04	Ability to identify related variables and understand their impact on business organisations.
	E09	Appreciate how the domestic and international financial markets operate.
	E13	Know the decision making processes in terms of policy and business strategy.
	E14	Understand the principles of business ethics and be able to design scenarios in which these principles can be put into business practice.
	E15	Propose, plan and lead business innovation projects that ensure the competitiveness of the company.

PRE-REQUISITES:

Although there are no compulsory pre-requisites, it is highly advisable to have attended the course of mathematics and economics. We will use some mathematical concepts but the Subjet is focus on concepts and strategic thinking.

SUBJECT PROGRAMME:

Subject contents:

1 - Introduction to Game Theory
1.1 - Introduction
1.2 - What is a “game”?
1.3 - Introduction to Game Theory
1.4 - Different types of Games
2 - Static Games. Complete Information
2.1 - Introduction
2.2 - Dominance
2.3 - Nash Equilibrium
2.4 - Mixed Strategies.
3 - Dynamic Games. Complete Information
3.1 - Dynamic games Introduction
3.2 - Backward induction
3.3 - Extension of dymanic games
3.4 - Other issues related to dynamic games. Application to a Business Plan
4 - Cooperation
4.1 - Reasons for cooperation
4.2 - Factors influencing cooperation
4.3 - Commitment
5 - Uncertainty. imperfect information
5.1 - Static Games. Auctions
5.2 - Dynamic Games. Uncertainty
6 - Behavioural Economics
6.1 - Economics and Behaviour
6.2 - Motivation and incentives
6.3 - Quick thinking and Risky choices

Subject planning could be modified due unforeseen circumstances (group performance, availability of resources, changes to academic calendar etc.) and should not, therefore, be considered to be definitive.

TEACHING AND LEARNING METHODOLOGIES AND ACTIVITIES:

Teaching and learning methodologies and activities applied:

The main methodologies used in this course will be:

- Theoretical presentation of the main aspects of the subject. These explanations will be accompanied by practical exercises to reinforce the knowledge. In any case, the active participation of students will always be encouraged.

- Two practical cases to be solved individually at home and in class

- Two practical cases to be solved in groups at home and in class

- Presentation of these cases in class. Students must present these cases in class to their counterparts if so required by the teacher, being able to answer their questions.

COVID-19: Due to covid-19, group cases should be conducted with all sanitary prescriptions, using online tools to develop group discusions and mantaining social distance, the use of masks and other hygenical preventions if groups meet presentially.

Online sessions will be conducted via TEAMS software programme

Group cases will be developed by students as their own intelectual document, complying with intelectual property and the anti plagiarism regulations

Student work load:

Teaching mode	Teaching methods	Estimated hours
Classroom activities	Master classes	26
	Other theory activities	4
	Practical exercises	14
	Practical work, exercises, problem-solving etc.	7
	Debates	4
	Coursework presentations	5
	Assessment activities	4
Individual study	Tutorials	4
	Individual study	46
	Individual coursework preparation	15
	Group cousework preparation	15
	Compulsory reading	2
	Recommended reading	4
	Total hours:	150

ASSESSMENT SCHEME:

Calculation of final mark:

Final exam:	50	%
Individual coursework 2:	15	%
Individual coursework 1:	10	%

Group coursework 1:	15	%
Group coursework 2:	10	%
TOTAL	100	%

*Las observaciones específicas sobre el sistema de evaluación serán comunicadas por escrito a los alumnos al inicio de la materia.

BIBLIOGRAPHY AND DOCUMENTATION:

Basic bibliography:

Osborne, M.J. (2009) An Introduction to Game Theory. International Edition, Oxford University Press.
Pérez, J., Jimeno, J.L. and Cerdá, E. (2013) Teoría de Juegos, 2ª Ed. Edit. Garceta
Baddeley, M (2017)Behavioural Economics: A Very Short Introduction. Oxford University Press.

Recommended bibliography:

Dixit, A. K. y Skeath (2004) Games of Strategy, 2ª Ed. Nueva York: W. W. Norton
Harrington, J. (2008) Games, Strategies and Decision Making, Worth Publishers
Ochs, J. (1995) Coordination problems, in Handbook of experimental economics (John H. Kagel and Alvin E. Roth, eds.) 195-251. Princeton: Princeton University Press
Watson, J. (2008) Strategy: An Introduction to Game Theory, 2ª Ed. Nueva York: W. W. Norton
Ariely, Dan (2017) Las trampas del Dinero. Ariel
Thaler, Richard (2015): Misbehaving, the making of behavioural economics. Penguin books

Recommended websites:

Game theory	www.gametheory.net
Game Theory Society	www.gametheorysociety.org
Cleverism	https://www.cleverism.com/applied-game-theory-day-day-business-operations/

* Guía Docente sujeta a modificaciones