



TECHNICAL SHEET OF THE SUBJECT

Data of the subject	
Subject name	Innovation and Technological Change
Subject code	E000012136
Main program	Grado en Análisis de Negocios/Business Analytics
Involved programs	Grado en Administración y Dirección de Empresas y Grado en Análisis de Negocios/Business Analytics [Fifth year]
Credits	6,0 ECTS
Type	Optativa (Grado)
Department	Departamento de Gestión Empresarial
Coordinator	Blanca Moro
Schedule	Consult for this purpose the schedules of the different groups in which it is taught.
Office hours	Check with the teacher for the schedule
Course overview	<p>ANECA: Innovation is, by definition and by essence, a motor for change in organizations, to detect new opportunities and to execute them in an original way in a globalized and hyperconnected scenario. The purpose of the Innovation and Technological Change course is to provide students with a basic understanding of the essential aspects of managing innovation in a digitalized and global scenario, as a source of sustainable competitive advantage, aimed at avoiding the most common mistakes in their management. Starting from the understanding of the concept of innovation, the process and the different types of innovations, progress will be made throughout the subject in the treatment of various aspects, such as: strategic and operational decisions inherent to the innovation process; the contribution of data analytics to the innovation strategy, with special emphasis on the development of new products/services and the definition of business models.</p>

Teacher Information	
Teacher	
Name	Blanca Moro Cañada
Department	Departamento de Gestión Empresarial
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SPECIFIC DATA OF THE SUBJECT

Contextualization of the subject
Contribution to the professional profile of the degree
<p>Interest : "The company's ability to innovate is highlighted more and more intensely as essential for the survival of organizations that operate in an environment of hypercompetition, regardless of the activities they carry out. For this reason, it is considered necessary for the student to have a space in which they can reflect on this issue and influence the uniqueness of the management of this dimension of the company that, surely, they will have to face in one way or another in their professional performance. The relevance of innovation in the company is not limited, therefore, to those sectors of activity that are intensive in technology, but today it has a place in the competitive dynamics of any sector."</p>



OBJECTIVE: to achieve competitive advantage in emerging and intensive sectors in technology and digitization.

CONTENTS: strategies and operations for innovation and change with the contribution of data analytics: Key decisions, organization, creativity and management, challenges and challenges, adoption and sustainable exploitation of technologies.

Prerequisites

Due to its nature, this subject maintains close and permanent links with the subjects "Strategic Analysis" and "Business Strategy", which provide certain basic pillars on which to build the debate around innovation in the company. However, it is not necessary to have specific prior training to take it.

Competencies - Objectives

Competences

GENERALES

CG01	Capacidad de organización y planificación en la identificación de problemas en el contexto de datos masivos	
	RA1	Describe, relaciona e interpreta situaciones y planteamientos de nivel medio
	RA2	Selecciona los elementos más significativos y sus relaciones en las situaciones planteadas
	RA3	Es capaz de enfrentarse con el estudio analítico de casos y escenarios, así como de llevar a efecto síntesis de información y de datos, empleando los conceptos adecuados.
CG02	Capacidad de análisis de datos masivos procedentes de diversas fuentes: texto, audio, numérica e imagen	
	RA1	Identifica y define, adecuada y proactivamente, un problema y sus posibles causas
	RA2	Plantea posibles soluciones pertinentes y diseña un plan de acción para su aplicación
CG08	Capacidad crítica y autocrítica en la sociedad de la información	
	RA1	Identifica los supuestos y las limitaciones de métodos y teorías
	RA2	Identifica, establece y contrasta hipótesis, variables y resultados de manera lógica y crítica
	RA3	Es capaz de construir un discurso propio, en un contexto de intercambio de opiniones.
CG09	Compromiso ético en la sociedad de la información	
	RA1	Persigue la excelencia en las actuaciones profesionales
	RA2	Se preocupa por las consecuencias que su actividad y su conducta pueden tener para los demás



	RA3	Incorpora en su discurso y en sus propuestas de actuaciones, las consecuencias que las mismas pueden tener para los distintos stakeholders de una organización global
CG11	Capacidad para aprender y trabajar autónomamente en la sociedad de la información	
	RA1	Es capaz de recopilar, preparar y ampliar información con carácter previo a su participación en actividades que implican la construcción de un discurso propio argumentado o la propuesta de soluciones innovadoras a un problema
	RA2	Realiza sus trabajos y su actividad necesitando sólo unas indicaciones iniciales y un seguimiento básico, poniendo en práctica las habilidades necesarias para la investigación independiente
	RA3	Busca y encuentra recursos adecuados para sostener sus actuaciones y realizar sus trabajos
ESPECÍFICAS		
CEO3	Conocer y comprender las habilidades necesarias para gestionar la innovación en los niveles estratégicos y operativos de una empresa, orientándose a la creación de una ventaja competitiva sostenible mediante la generación, la transferencia y la explotación de las innovaciones	
	RA1	Identifica la dinámica de los procesos de innovación en sus diferentes tipologías y componentes, reconociendo los factores que llegado el caso impulsan o limitan dichos procesos, con especial hincapié en las acciones que incentivan la creatividad e incrementan la generación de ideas innovadoras.
	RA2	Distingue y evalúa críticamente los diferentes modelos de gestión y de organización de la innovación, que se concretan en distintos mecanismos de obtención de tecnología, de protección de la innovación y explotación de la tecnología
	RA3	Identifica las cuestiones más actuales relativas a la gestión de la innovación en un escenario digitalizado global (innovación abierta; innovación disruptiva; protección de la innovación; innovación sostenible)
	RA4	Conoce herramientas de analítica de datos (o combinaciones de ellas) aplicadas a la estrategia de innovación de una organización, con especial énfasis en su contribución al desarrollo de nuevos productos/servicios y de nuevos modelos de negocio

THEMATIC BLOCKS AND CONTENTS

Contents - Thematic Blocks

CONTENTS: strategies and operations for innovation and change with the contribution of data analytics:

Key decisions, organization, creativity and management, challenges and challenges, adoption and sustainable exploitation of technologies.

ASSIGNMENT PROGRAM

BLOCK 1: INTRODUCTION

Topic 1: Invention, innovation and competitive advantage

Topic 2: Competitive advantage in emerging and technology-intensive sectors

BLOCK 2: IDENTIFICATION OF OPPORTUNITIES TO INNOVATE

Topic 3: Patterns of change and technological transition: the failure of leaders



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Topic 4: Standards Control and Network Effects

Topic 5: Strategies for the acquisition of technologies

BLOCK 3: EXPLOITATION OF INNOVATION

Topic 6: Capturing the benefits of innovation: legal protection and complementary goods

Topic 7: The sale of technology

BLOCK 4: CREATION AND MANAGEMENT OF THE INNOVATIVE COMPANY

Topic 8: External and internal incentives for innovation: people management

Topic 9: Organizing for innovation: the relevance of shared innovation

Topic 10: Innovation and sustainability: new products and new business models

TEACHING METHODOLOGY

General methodological aspects of the subject

METHODOLOGY and EVALUATION: case study.

The focus of the subject is fundamentally practical, focused on student learning, promoting their autonomy and active participation in said process, with the purpose of guiding them in the development of the skills described in the previous points. For this, the following activities will be carried out:

In-class Methodology: Activities

AF1. Participated sessions of an expository nature. In each master class will combine the lecture with the debate and/or the discussion on the topic in question corresponding to each class. This requires that the student be prepared to discuss the topic in question and the readings that will have been indicated as bibliographic material for each topic (according to the schedule). The teacher will lead the exposition of the basic notions, with the active participation and collaboration of the students, who discuss and debate the dark points or the nuances that are relevant for the correct understanding of the contents. Will include practical cases as backbones of the exhibition of ideas and contents, dynamic presentations and regulated or spontaneous participation of students by means of various activities.

Active participation in the classroom is an excellent tool to improve the learning of the student who participates and that of his classmates present in the classroom. A productive learning environment requires everyone in the classroom to be involved actively. **CG09, CEOPT01**

AF2. Analysis and resolution of cases proposed by the professor and/or by companies specialized in strategic consultancy of recognized prestige to which they will be invited so that they solve with the students, a real or realistic case. The starting material for such cases (current material, readings or reports, among others), will be available in the Course Resources Portal. These cases will be oriented so that allow the theoretical knowledge acquired to be applied in practice and favor the development of the student's argumentative capacity.

The work sessions directed in the classroom will be developed in groups. The activity of these classes will be to respond in writing to specific questions on real cases of companies. During the directed work sessions, the teacher will attend to the queries and doubts that arise during the performance of the work, stimulating the learning process of the students, so that as far as possible they are the ones who solve their doubts within their own working group, or through intergroup discussion. It is essential that, prior to each class of directed work, each student Read and prepare the bibliographic material indicated for each session. **CG01, CG02, CG09, CG10, CG11, CG17**

AF3. Oral presentations of topics and works. In accordance with the objectives of the matter, each group of students must present orally in the classroom a comment of company news related to the contents developed in the course and according to as established in the course schedule. These presentations will take carried out during class hours and will address the rest of the classmates of whom they they expect questions and evaluations about their contents. In the spirit of give rise to the debate around the news presented, each group must close their

presentation with the presentation of a question addressed to the class. In these presentations, each one of the members of the group must present some part of the commentary, and they are expected to be able to communicate to the audience the relevant concepts or theories that have been identified in the company news, and explain the logic of the strategic decision in question by making use of the theoretical content of the subject. Together with the previous presentations, it is also contemplated that the students have to expose in the



classroom other research work carried out in a group, according to instructions and planning designed by the teacher.

Non-Presential Methodology: Activities

AF4. Individual study and extension of the documentation that the student carries out to understand, rework and retain a scientific content with a view to a possible application in the field of your profession. Individual reading of texts and other materials related to the subject of study. In the Course Resources Portal, the students will be able to find documentation, materials of the sessions and the practices to realize. **CG01, CG04, CG14, CEOPT01**

AF5. Academic tutoring. The teaching team will be at the disposal of the student, in the times, dates and designated places, to solve the doubts and problems that originate the study of the contents, the work in the different activities of the subject, or any other topic directly or indirectly linked to the subject "Innovation and Strategy". Tutoring is a tool that the teaching team of this subject puts to disposition of the student so that he improves his learning process; However, the student's decision to use or not this tool will not affect the final grade of he subject. **CG01, CG04, CG06**

AF6. Organized reading. Reading and analysis of relevant texts with various tasks that assess reading comprehension individually or in groups. **CG11**

AF7. Cooperative learning: company news comments. This activity group part of the search for press articles (general and specialized) on current and relevant company news that can be related to the contents of the matter. Each group must make a written comment on the news in question, including: Brief synopsis of the news;The bibliographical source(s) of the news; Comment of the group in which the content of the article is linked, are presented accurate and complete content, the content is explained in detail and value judgments, criticisms or evaluations are issued on the contents of the subject and/or the news. **CG04, CG17**

SUMMARY STUDENT WORKING HOURS

CLASSROOM HOURS			
Lecciones de Carácter expositivo	Ejercicios y resolución de casos y de problemas		
15.00	50.00		
NON-PRESENTIAL HOURS			
Estudios individual y/o en grupo, y lectura organizada	Ejercicios y resolución de casos y de problemas	Trabajos monográficos y de investigación, individuales o colectivos	Sesiones tutoriales
25.00	30.00	25.00	5.00
ECTS CREDITS: 6,0 (150,00 hours)			

EVALUATION AND CRITERIA

Evaluation activities	Evaluation criteria	Weight
Evaluation activities Evaluation criteria Weight Final written exam: with an orientation essentially practical, based on the discussion of case/s practical/s, allows to demonstrate to the student their	Comprehensive and relational capacity. Argumentative and expository capacity.	50



knowledge applied to the resolution of problems related to the strategic direction of the innovation.		
Analysis of real business cases: Applications practices of the contents, the models and the tools developed during the course, proposal of the professor and/or consultants of prestige. The final grade for this activity will be arithmetic mean of each and every one of the exercises/cases resolved throughout the course academic.	Practical application and teamwork. Depth of analysis and understanding.	20
Participación activa en clase: Se considera la participación activa del alumno en el aula: búsqueda de información adicional, reflexión para la toma de postura personal sobre temas concretos, proactividad y otros rasgos participativos; se valorarán tanto las aportaciones como las actitudes del alumno, fruto de un proceso de aprendizaje relacionado con las competencias definidas para la materia	Quality of attitude towards individual work Participation and rigor. Proactivity	15
News Comments: Written Work based on actual company news and relevance to the proposed subject. Oral presentation of news comments: According to the course schedule, each week of the course the presentations will take place oral news commentaries.	Search and presentation of information. Rigor and Proactivity	15

Ratings

To pass the subject in ordinary call, the student must pass each and every one of the activities that are part of the final mark of the subject (final exam, analysis of real cases, news comments, presentation of news comments and stake).

Exercises that are NOT delivered in the exact conditions of place, date and time scheduled for each will NOT be taken into account. exercise, and communicated at the beginning of the course/semester in the subject schedule.

Attendance at all directed work sessions is mandatory. The student who does not attend any of these classes, will obtain a grade of "0" (zero) in the group work corresponding to said class, unless there is justification.

STUDENTS WITH SCHOOL WAIVER:

Those students who have obtained exemption from schooling during the semester will only have to face the activity of "final exam", and your final grade in the subject will be formed 100% by the grade in said activity.

EVALUATION IN EXTRAORDINARY CALL:

1. Those students who have not passed the exam in the ordinary call must attend it. Passed this exam,



The weightings established as a general evaluation standard will apply.

2. Those students who do not pass any of the other two elements that make up the evaluation of the subject (analysis of real company cases and news comments). These students, in addition to being examined in all the matter of the subject, they must carry out a series of complementary practices defined by the teacher.

BIBLIOGRAPHY AND RESOURCES

Basic Bibliography

Cetindamar, D.; Phaal, R. y Probert, D. (2016). Technology Management. Activities and Tools. Palgrave Macmillan, Second edition.

Harford, T (2018) Cincuenta innovaciones que han cambiado el mundo. Conecta.

Michalko, M (2007) Los secretos de los genios de la creatividad. Gestión 2000.

Mootee, I. (2014) Design Thinking para innovación estratégica. Empresa activa.

Tidd, J. y Bessant, J. (2013). Managing Innovation: Integrating Technological, Market and Organizational Change.

Chichester: John Wiley, Fifth edition.

Westland, J. C. (2017). Global innovation management. Palgrave Macmillan, Second edition.

Oficina Española de Patentes y Marcas (www.oepm.es)

Websites

Moodlerooms of the Subject and links of interest on Technology and Innovation (among others):

EUROSTAT (<http://ec.europa.eu/eurostat/data/database>)

INE (www.ine.es)

Índice de competitividad del IMD International Lausana (<https://www.imd.org/wcc/world-competitivenesscenter/>)

Índice de Competitividad Global (ICG) del Foro Económico Mundial (<https://www.weforum.org/reports/the-global-competitiveness-report-2017-2018>)

Informes de la Fundación COTEC (www.cotec.es)

INNOSIGHT (<https://www.innosight.com/>)

Ministerio de Economía y Competitividad. Secretaría de Estado de Investigación, Desarrollo e Innovación

(<http://www.idi.mineco.gob.es>)

Complementary Bibliography

Borghino, M (2019) Disrupción: mas allá de la innovación. Grijalbo.

Hidlago Nuchera, A (2002) La gestión de la innovación y la tecnología. Piramide.

SHANE, S.A. (2009): Technology Strategy for Managers and Entrepreneurs, Prentice Hall.

3M (2002): A Century of Innovation. The 3M Story, 3M Company.

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<https://servicios.upcomillas.es/sedelectronica/inicio.aspx?csv=02E4557CAA66F4A81663AD10CED66792>