ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

103000842 - Introduction To Innovation And Entrepreneurship Ma

DEGREE PROGRAMME

10AZ - Master Universitario En Innovación Digital

ACADEMIC YEAR & SEMESTER

2025/26 - Semester 1

Index

Learning guide

1. Description

1.1. Subject details

Name of the subject	103000842 - Introduction To Innovation And Entrepreneurship Ma
No of credits	6 ECTS
Type	Compulsory
Academic year ot the programme	First year
Semester of tuition	Semester 1
Tuition period	September-January
Tuition languages	English
Degree programme	10AZ - Master Universitario en Innovación Digital
Centre	10 - E.T.S. De Ingenieros Informáticos
Academic year	2025-26

2. Faculty

2.1. Faculty members with subject teaching role

Name and surname	Office/Room	Email	Tutoring hours *
Roberto Martinez Gamero	CAIT	roberto.martinez@upm.es	W - 10:00 - 12:00 The tutoring schedule is indicative and subject to possible changes. Please check tutoring times with the faculty member in charge.

Alberto Tejero Lopez (Subject coordinator)	Office D5215	alberto.tejero@upm.es	Tu - 15:00 - 17:00 The tutoring schedule is indicative and subject to possible changes. Please check tutoring times with the faculty member in charge.

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3. Prior knowledge recommended to take the subject

3.1. Recommended (passed) subjects

The subject - recommended (passed), are not defined.

3.2. Other recommended learning outcomes

- According to prerequisites for EIT Digital master program, this is the first course for enrolled students in the Master Degree. Students should have finished their Engineering Degree Project(240 ECTS), accepted in the Master and formally registered

4. Skills and learning outcomes *

4.1. Skills to be learned

CB07 - Que los estudiantes sepan aplicar los conocimientos adquiridos y su capacidad de resolución de problemas en entornos nuevos o poco conocidos dentro de contextos más amplios (o multidisciplinares) relacionados con su área de estudio

CB08 - Que los estudiantes sean capaces de integrar conocimientos y enfrentarse a la complejidad de formular juicios a partir de una información que, siendo incompleta o limitada, incluya reflexiones sobre las responsabilidades sociales y éticas vinculadas a la aplicación de sus conocimientos y juicios

CB09 - Que los estudiantes sepan comunicar sus conclusiones y los conocimientos y razones últimas que las sustentan a públicos especializados y no especializados de un modo claro y sin ambigüedades

CE-EIT01 - Capacidad para seguir y aplicar los procesos y actividades del emprendimiento para lanzar un empresa de base tecnológica basada en actividades previas de I+D e identificar diferentes fuentes de financiación de emprendimiento e innovación, y seleccionar la más apropiada para el modelo de negocio y la tecnología consideradas.

CE-EIT02 - Capacidad para diseñar las actividades y la estructura de gestión adecuadas para un proyecto de innovación, desde su concepción a la explotación de los resultados, usando un modelo de gestión adaptado al tipo de proyecto.

CG01 - Que los estudiantes sean capaces de predecir y controlar la evolución de situaciones complejas mediante el desarrollo de nuevas e innovadoras metodologías de trabajo adaptadas al ámbito científico/investigador, tecnológico o profesional concreto, en general multidisciplinar, en el que se desarrolle su actividad.

CG03 - La capacidad de usar la lengua inglesa de manera competente, es decir, con capacitación para tareas complejas de trabajo y estudio.

CG07 - Capacidad de trabajar y comunicarse también en contextos internacionales.

CG08 - La capacidad de traducir innovaciones en soluciones comerciales factibles.

CG09 - La capacidad de transformar las experiencias prácticas en problemas y desafíos de investigación.

4.2. Learning outcomes

RA105 - - In depth understanding of the general process and roles involved in developing an idea and starting up a new technology-based company

RA107 - -- In depth understanding of the important elements in managing companies and developing its human resources

RA104 - - In depth understanding the basics of technology watch and transfer

* The Learning Guides should reflect the Skills and Learning Outcomes in the same way as indicated in the Degree Verification Memory. For this reason, they have not been translated into English and appear in Spanish.

5. Brief description of the subject and syllabus

5.1. Brief description of the subject

InIntroduction to innovation and entrepreneurship management: Introductory course to offer all EIT Digital Master students a general understanding on concepts and types of innovation, innovation processes, models and tools applied in the ICT sector.

5.2. Syllabus

1. Welcome session

2. Concepts and types of innovation

3. Introduction to innovation management

4. Introduction to Open Innovation

5. European R&I policy

6. Protection and commercialization of knowledge

7. Creativity as a source of innovation

8. Funding innovation (e.g. H2020)

9. The EU Framework Programme: Horizon Europe

10. Innovation Partnerships

11. Introduction to entrepreneurship

12. Strategic definition for entrepreneurs

13. Strategic competitive analysis

6. Schedule

6.1. Subject schedule*

Week	Type 1 activities	Type 2 activities	Distant / On-line	Assessment activities
1	**Welcome session** Duration: 04:00 Lecture			**Attendance and participation (of the entire course)** Other assessment Progressive assessment Presential Duration: 01:00
2	**Concepts and types of innovation** Duration: 04:00 Lecture			
3	**Introduction to innovation management** Duration: 04:00 Lecture			
4	**Introduction to Open Innovation** Duration: 04:00 Lecture			
5	**European R&I policy** Duration: 04:00 Lecture			
6	**Protection and commercialization of knowledge** Duration: 04:00 Lecture			
7	**individual Quiz** Duration: 04:00 Additional activities			**Individual Quiz** Problem-solving test Progressive assessment Presential Duration: 04:00
8	**Creativity as a source of innovation** Duration: 04:00 Lecture			
9	**Funding innovation (e.g. H2020)** Duration: 04:00 Lecture			
10	**The EU Framework Programme: Horizon Europe** Duration: 04:00 Lecture			
11	**Innovation Partnerships** Duration: 04:00 Lecture			
12	**Introduction to entrepreneurship** Duration: 04:00 Lecture			

13	**Strategic definition for entrepreneurs** Duration: 04:00 Lecture			
14	**Strategic competitive analysis** Duration: 04:00 Lecture			
15	**Presentation of case study** Duration: 04:00 Additional activities			**Report of the case study** Group work Progressive assessment Presential Duration: 01:00 **Presentation of case study** Group presentation Progressive assessment Presential Duration: 04:00
16				
17				**Global assessment test and report of the case study** Written test Global examination Presential Duration: 02:30

Depending on the programme study plan, total values will be calculated according to the ECTS credit unit as 26/27 hours of student face-to-face contact and independent study time.

7. Activities and assessment criteria

7.1. Assessment activities

7.1.1. Assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
1	Attendance and participation (of the entire course)	Other assessment	Face-to-face	01:00	10%	5 / 10	
7	Individual Quiz	Problem-solving test	Face-to-face	04:00	40%	5 / 10	CB07 CB08 CG01 CG03 CG08 CG09 CE-EIT01
15	Report of the case study	Group work	Face-to-face	01:00	30%	5 / 10	CB07 CB08 CB09 CG01 CG03 CG07 CG08 CG09 CE-EIT01 CE-EIT02
15	Presentation of case study	Group presentation	Face-to-face	04:00	20%	5 / 10	CB07 CB08 CB09 CG01 CG03 CG07 CG08 CG09 CE-EIT01 CE-EIT02

7.1.2. Global examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills

17	Global assessment test and report of the case study	Written test	Face-to-face	02:30	70%	5 / 10	CB07 CB08 CB09 CG01 CG03 CG07 CG08 CG09 CE-EIT01 CE-EIT02

7.1.3. Referred (re-sit) examination

Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
Extraordinary assessment test	Written test	Face-to-face	02:30	70%	5 / 10	CB07 CB08 CB09 CG01 CG03 CG07 CG08 CG09 CE-EIT02

7.2. Assessment criteria

Progressive assessment

Evaluation activity	Modality	Weight	Date	Contents
Individual Quiz	Individual	40%	Week 7	Lectures 1, 2, 3, 4, 5 and 6
Report of the case study	Group	30%	Week 15	Written report
Presentation of the case study	Group	20%	Week 15	Lectures 1-13 Slides to present the work in 20m
Attendance and participation	Individual	10%	All weeks	It measures the f2f activity of the student during the course

Global assessment test

Evaluation activity	Modality	Weight	Date	Contents
Individual final exam and report of the case study	Individual	70%	Week 17	Final exam of the subject for those students who have not been able to pass the

				subject through the progressive evaluation system and submission of the case study report

NOTE: The activities that cannot be recovered in the "Global assessment test" and "Extraordinary assessment test" are the following: the presentation of the case study in a group (20%) and attendance and participation in class during the course (10%).

8. Teaching resources

8.1. Teaching resources for the subject

Name	Type	Notes
James M. Utterback (1994). Mastering the dynamics of innovation. Harvard Business School Press.	Bibliography	
Alexander Osterwalder & Yves Pigneur (2010). Business model generation. John Wiley & Sons. New Jersey 2010.	Bibliography	
Eric Ries (2011): The Lean Startup. Crown Business New York. 2011	Bibliography	

W. Chan Kim and Renée Mauborgne (2015). Blue Ocean Strategy. Harvard Business Review Press. 2015. ISBN: 978-1-62527-449-6	Bibliography	
Henry Chesbrough. Open Innovation: The New Imperative for Creating and Profiting from Technology (HBS Press, 2003).	Bibliography	
Henry Chesbrough (2011). Open Services Innovation. Rethinking your business to grow and compete in a new era. Ed. Jossey-Bass. 2011. ISBN 978-0-470-90574-6	Bibliography	
Geoffrey A. Moore, ?CrossingtheChasm?1991, revised1999 and 2014	Bibliography	
Richard Foster & Sarah Kaplan, ?Creative Destruction: Why Companies that Are Built to Last Underperform the Market?, 2001	Bibliography	
Henry Chesbrough. Open Innovation: The New Imperative for Creating and Profiting from Technology, 2003	Bibliography	
Eric von Hippel, Open User Innovation, 2013	Bibliography	
Steve Blank, ?The Four Steps to the Epiphany? 2005, 2nd Ed. 2013	Bibliography	
Steve Blank& Bob Dorf, ?The Startup Owner?s Manual?, 2012	Bibliography	
Madeleine I. G. Daepp, Marcus J. Hamilton, Geoffrey B. West, Luís M. A. Bettencourt, ?The Mortality of Companies.? 2015	Bibliography	

Simon Sinek, ?How great leaders inspire action?, TED Talk, https://www.ted.com/talks/simon_sinek_how_great_leaders_inspire_action	Bibliography	
Brynjolfsson, Erik, and Andrew McAfee. ?Race Against the Machine? Lexington, Mass: Digital Frontier Press, 2012.	Bibliography	
Gordon, Robert J. ?Is U.S. Economic Growth Over? Faltering Innovation Confronts the Six Headwinds?, NBER Working Papers 2012.	Bibliography	
Chad Syverson, ?Challenges to Mis measurement Explanations for the U.S. Productivity Slowdown? NBER WorkingPapers2016	Bibliography	
Cowen, Tyler, ?The Great Stagnation: How America Ate Allthe Low-Hanging Fruit of Modern History, GotSickand Will (Eventually) Feel Better. New York: Dutton Adult, 2011.	Bibliography	
Course slides and material	Bibliography	Available in Moodle platform of EIT Digital during the course.
Tejero Alberto and Gonzalo Léon. Ecosistemas de innovación abierta. Medición y gestión. Editorial Sicomoro, 2021	Bibliography	https://p-nt-www-amazon-es-kalias.amazon.es/Ecosistemas-Innovaci%C3%B3n-Abierta-Medici%C3%B3n-Gesti%C3%B3n-ebook/dp/B09NYDW9JG/ref=sr_1_1?qid=1685432105&refinements=p_27%3AGonzalo+Le%C3%B3n+Serrano&s=books&sr=1-1
Gonzalo Léon, Alberto Tejero et. al,. Economía Disruptiva. Escuela de Organización Industrial, 2015	Bibliography	(libre descarga) https://www.eoi.es/es/savia/publicaciones/78574/sectores-de-la-nueva-economia-2020-economia-disruptiva

9. Other information

9.1. Other information about the subject

La asignatura se relaciona con el ODS 9 (Construir infraestructuras resilientes, promover la industrialización sostenible y fomentar la innovación), ODS4 (Garantizar una educación inclusiva, equitativa y de calidad y promover oportunidades de aprendizaje durante toda la vida para todos) y ODS17 (Revitalizar la Alianza Mundial para el Desarrollo Sostenible).