

* Please ensure that you use the official UGR nomenclature and terminology (ES-EN) available in [UGRTerm](#) for the names of programmes, courses, faculties/schools, departments, competences/skills, teaching methodology, etc.

SEMESTER	CREDITS (ECTS)	TYPE	MODE OF DELIVERY	LANGUAGE(S) OF INSTRUCTION
2nd	4	Elective	Face-to-face	English
MODULE		Master in Economics		
SUBJECT		Technological Innovation Management		
CENTRE / FACULTY / SCHOOL RESPONSIBLE FOR THE PROGRAMME		International School for Postgraduate Studies (EIP)		
MASTER'S DEGREE		Master in Economics		
FACULTY / SCHOOL		Faculty of Economics and Business		
TEACHING STAFF ⁽¹⁾				
Vanesa Barrales Molina (coordinator)				
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OFFICE HOURS		Office hours or link to staff directory where they can be checked.		

¹ Consulte posible actualización en Acceso Identificado > Aplicaciones > Ordenación Docente

(∞) Esta guía docente debe ser cumplimentada siguiendo la "Normativa de Evaluación y de Calificación de los estudiantes de la Universidad de Granada" (<http://secretariageneral.ugr.es/pages/normativa/fichasugr/ngc7121/>)

Full name	
CONTACT DETAILS	Dpto. XXXXX, XXª planta, Facultad/Escuela de XXXX. Despacho nº X. Email address: yyyy@ugr.es
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GENERAL AND SPECIFIC COMPETENCES	
<p>GENERAL COMPETENCES CG1 – That the student attain the ability for analysis and synthesis, which includes being capable of defining, distinguishing and relating both the basic concepts and the premises upon which the exposition of any argument is built, as well as stating and basing its content in a concise and critical way, in the context – scientific, political, economic, organizational or whatever the type may be – in which it is presented.</p> <p>BASIC COMPETENCES CB6 – To possess and understand knowledge that gives a basis or opportunity to be original in the development and/or application of ideas, often in a research context. CB7 – That the students know how to apply the knowledge acquired and their ability to solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to their area of study. CB8 – That the students are able to integrate knowledge and handle the complexity of formulating judgements from information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgements. CB9 – That the students know how to communicate their conclusions and the knowledge and underlying reasons that sustain them to specialist and non-specialist audiences in a clear and unambiguous way. CB10 – That the students possess the learning skills to enable them to continue studying in a way that will necessarily be largely self-managed and autonomous.</p> <p>SPECIFIC COMPETENCES CE1 – Acquire bibliographical information on the current state of economics research CE2 – Acquire bibliographical information on the current state of business research CE3 – Understand the relevant existing theories, tendencies and debates CE4 – Apply and extend existing theories to solve real problems CE5 – Apply advanced techniques to real problems CE6 – Formulate and answer questions in a way applicable to business strategies CE7 – Formulate and answer questions in a way applicable to economic policy CE8 – Formulate and contrast hypotheses related to theoretical assumptions and predictions CE9 – Plan and organize empirical studies CE10 - Plan and organize experimental studies CE11 - Plan and organize field studies CE12 - Plan and organize business diagnostic studies CE13 – Programme in specific software for economic studies in the laboratory CE14 – Programme in specific software for data analysis CE15 – Solve technical and practical problems related to the design of experimental studies CE16 – Solve technical and practical problems related to the design of empirical studies CE17 – Solve technical and practical problems related to the organization, presentation and analysis of the data obtained from a study CE18 – Assist as support staff in research projects CE19 – Assist as support staff in consulting projects CE20 – Draw up scientific articles CE21 – Draw up consulting reports adapted to their possible users CE22 – Public presentation and defence of own work CE23 – Get to know the principal differences between countries (cultural effects) of economic values</p>	



CE24 – Get to know the principal differences between countries (cultural effects) of economic results

OBJECTIVES OR LEARNING OUTCOMES (ACCORDING TO THE MASTER'S PROGRAMME VALIDATION REPORT)

Student will know/understand:

- CE2 – Acquire bibliographical information on the current state of business research
- CE3 – Understand the relevant existing theories, tendencies and debates
- CE5 – Apply advanced techniques to real problems
- CE9 – Plan and organize empirical studies
- CE10 - Plan and organize experimental studies
- CE15 – Solve technical and practical problems related to the design of experimental studies
- CE16 – Solve technical and practical problems related to the design of empirical studies

Student will be able to:

- Acquire bibliographic information about the current state of the art on technological innovation management.
- Understand and interpret theoretical models related to innovation.
- Propose and solve news related to research into technological innovation management.
- Understand principles of technological innovation management.
- Recognize the importance of technological innovation management to improve competitiveness.
- Recognize the importance of research into innovation and the involvement of best journals and conferences.
- Understand the best method to gather information and data through surveys and other techniques related to structural equations.

BRIEF DESCRIPTION OF THE COURSE CONTENT (ACCORDING TO THE MASTER'S PROGRAMME VALIDATION REPORT)

Technological innovation for competitiveness
Technological innovation dynamics
Innovation patterns
Strategic management of innovation
Protection and diffusion strategies for innovation

SYLLABUS

THEORY PROGRAM

CHAPTER 1: Innovation in the making

- 1.1. Dimensions of innovation
- 1.2. Degrees of innovation
- 1.3. Users of innovation
- 1.4. Sources of innovation
- 1.5. The Gartner's curve



CHAPTER 2: Models for innovation development

- 2.1. Linear models
- 2.2. Stage-gate processes for innovation
- 2.3. Fuzzy front-end models
- 2.4. Funnel models
- 2.5. Open innovation models

CHAPTER 3: Innovation from an international perspective

- 3.1. Innovation clusters
- 3.2. Global innovation index 2019

CHAPTER 4: Innovation strategy

- 4.1. Strategic options for innovation
- 4.2. Matrix to understand the strategic management of innovation
- 4.3. Collaboration strategy
- 4.4. Protection strategy

CHAPTER 5: The innovative company

- 4.1. The ambidextrous company
- 4.2. Organizational structure and innovation
- 4.3. Innovation culture
- 4.4. Key employees and team working
- 4.5. Intrapreneurship and spin-offs

CHAPTER 6: Recent research trends in innovation

- 5.1. Key relatively recent seminal papers
- 5.2. Key recent empirical papers

PRACTICAL PROGRAM

- P1.** Emergent technologies in 2020 Gartner's curve
- P2.** Your country in the ranking 2020 Global Innovation Index
- P3.** Searching real patents in databases

REQUIRED AND RECOMMENDED READING

REQUIRED READING:

- Dodgson, M. and Gann, D. M. (2013). The Oxford Handbook of innovation Management. Oxford university press.
- Goffin, K. and Mitchell, R. (2017). Innovation Management: Effective strategy and implementation. Macmillan education.
- Tid, J. and Bessant (2013). Managing innovation: Integrating technological, market and organizational change. Wiley: first edition.
- Gault, F. (2013). Handbook of innovation indicators and measurement. Edward Elgar Publishing Limited.

RECOMMENDED READING:

- Fagerberg, J., Mowery, D. and Nelson, R.R. (2006). The Oxford Handbook of innovation. Oxford University Press.
- Shalley, C. E., Hitt, M. A. and Zhou, J. (2015). Creativity, Innovation and Entrepreneurship. Oxford University Press.



- Williams, M. and Vogt, P.(2014). The Sage Handbook of Innovation in Social Research Methods. SAGE

USEFUL LINKS (OPTIONAL)

<https://hbr.org/>
<https://www.gartner.com/en>
<https://www.globalinnovationindex.org/Home>
<https://worldwide.espacenet.com/>

TEACHING METHODOLOGY

The theoretical part of the subject will be based on selection, reading and debate of selected book chapters of handbooks in innovation. Additionally, some seminal papers on innovation will be selected to know the state of the art in this field. The application of this theoretical part will be developed through the analysis of recent empirical papers on innovation which students will present to the rest of colleagues. Finally, each student will propose a prospective theoretical model which proposes a set of hypotheses reflecting the current trends of the research field.

ASSESSMENT (EVALUATION INSTRUMENTS, EVALUATION CRITERIA, PERCENTAGE OF FINAL MARK, ETC)

ORDINARY ASSESSMENT SESSION

Article 17 of the UGR Assessment Policy and Regulations establishes that the ordinary assessment session (*convocatoria ordinaria*) will preferably be based on the continuous assessment of students, except for those who have been granted the right to a single final assessment (*evaluación única final*), which is an assessment method that only takes a final exam into account.

This ordinary assessment session will be conducted through an ongoing evaluation of student training in order to assess (shown in parenthesis the weight of each item in the final assessment):

- 2 presentations of topics related to the subject: **20%**
- 1 workshop about search of patents: **10%**
- Active attendance to classes: **10%**
- **Written exam: 60%**. Consisting in five questions related to theoretical and practical issues developed in lecturers. **A minimum grade of 4 points in exam (above 10 points) is required** to consider grades in presentations and attendance.

EXTRAORDINARY ASSESSMENT SESSION

Article 19 of the UGR Assessment Policy and Regulations establishes that students who have not passed a course in the ordinary assessment session (*convocatoria ordinaria*) will have access to an extraordinary assessment session (*convocatoria extraordinaria*). All students may take part in this extraordinary assessment session, regardless of whether or not they have followed continuous assessment activities. In this way, students who have not carried out continuous assessment activities will have the opportunity to obtain 100% of their mark by means of an exam and/or assignment.

Students who failed or did not attend classes should realize a final evaluation based on the same criteria:

- Written exam: 100%. Consisting in five questions related to theoretical and practical issues developed in lecturers.

DESCRIPTION OF THE EXAMS/TESTS THAT WILL FORM PART OF THE SINGLE FINAL ASSESSMENT



"EVALUACIÓN ÚNICA FINAL" (AN ASSESSMENT METHOD THAT ONLY TAKES A FINAL EXAM INTO ACCOUNT) AS ESTABLISHED IN THE UGR ASSESSMENT POLICY AND REGULATIONS)

Article 8 of the UGR Assessment Policy and Regulations establishes that students who are unable to follow continuous assessment methods due to justifiable reasons shall have recourse to a single final assessment (*evaluación única final*), which is an assessment method that only takes a final exam into account.

In order to opt for a single final assessment (*evaluación única final*), students must send a request, using the corresponding online procedure, to the coordinator of the master's programme, in the first two weeks of the course or in the two weeks following their enrolment (if the enrolment has taken place after the classes have already begun). The coordinator will communicate this information to the relevant teaching staff members, citing and verifying the reasons why the student is unable to follow the continuous assessment system.

In this case, the assessment will comprise:

- Written exam: 100%. Consisting in five questions related to theoretical and practical issues developed in lecturers.

SCENARIO A (ON-CAMPUS AND REMOTE TEACHING AND LEARNING COMBINED)

TUTORIALS

TIMETABLE

(According to Official Academic Organization Plan)

TOOLS FOR TUTORIALS

(Indicate which digital tools will be used for tutorials)

- https://directorio.ugr.es/static/PersonalUGR/*/show/7edf19293e3b418e2e2f853786165511

- Google Meet

MEASURES TAKEN TO ADAPT TEACHING METHODOLOGY

- Theory lessons will be developed online using Google Meet, for all the students enrolled at the same time.
- Practical lessons will be developed face-to-face in the classroom for reduced groups of students.

MEASURES TAKEN TO ADAPT ASSESSMENT (Instruments, criteria and percentage of final overall mark)

Ordinary assessment session

- The Ordinary assessment will be the same as previously described, except that we will use Prado exámenes platform to do the exam. Also, we will have a parallel Google Meet session to respond doubts and questions.

Extraordinary assessment session

- The Extraordinary assessment session will be the same as previously described, except that we will use Prado exámenes platform to do the exam. Also, we will have a parallel Google Meet session to respond doubts and questions.

Single final assessment



<ul style="list-style-type: none"> The Single final assessment will be the same as previously described except that we will use Prado exámenes platform to do the exam. Also, we will have a parallel Google Meet session to respond doubts and questions. 	
SCENARIO B (ONCAMPUS ACTIVITY SUSPENDED)	
TIMETABLE (According to Official Academic Organization Plan)	TOOLS FOR TUTORIALS (Indicate which digital tools will be used for tutorials)
<ul style="list-style-type: none"> https://directorio.ugr.es/static/PersonalUGR/*/show/7edf19293e3b418e2e2f853786165511 	<ul style="list-style-type: none"> Google Meet
MEASURES TAKEN TO ADAPT TEACHING METHODOLOGY	
<ul style="list-style-type: none"> Both theoretical and practical lectures will be developed online using Google Meet and Prado platform. 	
MEASURES TAKEN TO ADAPT ASSESSMENT (Instruments, criteria and percentage of final overall mark)	
Ordinary assessment session	
<ul style="list-style-type: none"> The Ordinary assessment will be the same as previously described, except that we will use Prado exámenes platform to do the exam. Also, we will have a parallel Google Meet session to respond doubts and questions. 	
Extraordinary assessment session	
<ul style="list-style-type: none"> The Extraordinary assessment session will be the same as previously described, except that we will use Prado exámenes platform to do the exam. Also, we will have a parallel Google Meet session to respond doubts and questions. 	
Single final assessment	
<ul style="list-style-type: none"> The Single final assessment will be the same as previously described except that we will use Prado exámenes platform to do the exam. Also, we will have a parallel Google Meet session to respond doubts and questions. 	

