

# COURSE GUIDE – EXTENDED FORM

Academic year 2026 – 2027

## 1. Program information

1.1 University	University of Oviedo
1.2 Faculty	Faculty of Chemistry
1.3 Department	Business Administration
1.4 Field	Business Organization
1.5 Study level	Master
1.6 Specialization	Chemical and Biochemical Process Technology - CBPT

## 2. Course information

2.1.1 Course name	<b>Research and Innovation Management</b>		
2.1.2 Course code	MINQUI01-1-016	2.1.3. Course category Fundamental/Specialized/Complementary	S
2.2 Course instructor	Silvia María González Fernández		
2.3 Course instructors for applied activities (S, L, P, Pr)	Silvia María González Fernández		
2.4 Year of study <sup>2</sup>	1	2.5 Semester <sup>3</sup>	2
2.6 Evaluation type <sup>4</sup>	E, A	2.7 Course type <sup>5</sup>	DOB

## 3. Amount of time estimated for course activities (hours / term)

3.1 Hours /week	1.6	3.2 course	1	3.3a sem.		3.3b laboratory		3.3c project	0.6	3.3.d. practice	
3.4 Total hours from curriculum <sup>6</sup>	22	3.5 course	14	3.6a sem.		3.6b laboratory		3.6c project	8		
Time spent for related activities <sup>7</sup>										Hours	
Study of recommended books, course support, scientific papers and course notes										22	
Practical skills development										20	
Preparation of seminars / laboratory works / project phases / home works / presentations										15	
Evaluation <sup>8</sup>										2	
Other activities:											
3.7 Total hours of individual study <sup>9</sup>			59								
3.8 Total hours per semestre <sup>10</sup>			81								
3.9 Number of credits			3								

## 4. Prerequisites (optional)

4.1 Curriculum <sup>11</sup>	
4.2 Learning outcomes	

## 5. Requirements

5.1 Conditions for course delivery <sup>12</sup>	Blackboard, video projector
5.2 Seminar / Laboratory / Project delivery requirements <sup>13</sup>	Blackboard, video projector

## 6. Overall objective of the course

This course is conceived to provide students with a general background on the management of technological firms from a theoretical and practical perspective focusing on research and development (R&D) processes.

## 7. Learning outcomes

<b>Knowledge</b>	The student / graduate will:  1. Have a thorough understanding of current technologies and their limitations, and be aware of opportunities for new and emerging technologies in industrial processes.
<b>Skills</b>	The student / graduate will:  2. Be able to manage innovation and research in technological environments: transfer of results, intellectual property, innovation budgets, application projects, etc.
<b>Responsibility and autonomy</b>	The student / graduate will:  5. Be competent in the preparation of technical reports in compliance with guidelines, i.e. audits and certifications.

## 8. Teaching methods

The teaching process will involve participatory lectures and debates, supported by PowerPoint presentations made available to students. These presentations include images and diagrams to make the information easier to understand and assimilate. The teaching method is also based on projects in which the students will be involved into the development and formal elaboration of a R&D project proposal. This activity will be carried out in groups of students to contribute in the development of transversal skills, such as team-working, leadership, oral and written communication skills, etc.

## 9. Course content

9. 1. Courses <sup>15</sup>	Teaching methods	Time allocation
9.1.1. Firm competitiveness and Research and Development.	Interactive lecture. Clarifying explanations. Conferences of professionals in the field.	3 hours
9.1.2. Technological innovation and transformation.		4 hours
9.1.3. Science and technology, from a research-based perspective and designing research project proposals.		4 hours
9.1.4. Technological diffusion, first mover and followers. Financing strategy.		3 hours
<b>Course bibliography:</b> <i>Books:</i> SCHILLING, M.A. (2005 or newer): Strategic Management of Technological Innovation; Mc Graw Hill; Boston. FERNÁNDEZ SÁNCHEZ, E. (2005): Estrategia de Innovación, Thomson, Madrid.		
<b>9.2a Project</b>	<b>Working methods</b> <sup>16</sup>	<b>Time allocation</b>
Develop a R&D project proposal working in groups of students	Analysis and discussion of cases	8 hours
<b>Bibliography for applied activities</b> (seminar / laboratory / project): Same bibliography as courses.		

## 10. Evaluation

Activity type	10.1 Evaluation criteria	10.2 Evaluation method	10.3 Percentage of the final grade
10.4 Final Exam	Completeness and correctness of knowledge. Degree of mastery of specialized terminology and communication skills. Ability to apply acquired skills. Ability to process data and solve given problems.	Summative assessment test (final evaluation).	40%
10.5a Project	Ability to apply learned knowledge in practice. Ability for analysis, personal interpretation, originality, and creativity	Cases completed in class. Group assignment.	60%
10.6 Conditions for passing			

Grades from 0 to 10 points will be awarded to each activity of the course. The score of the Final Exam must be, at least, 4 points and the score of the Project activity, at least, 5 points.  
The Final Evaluation of the module is determined by considering the scores and weights assigned to each activity within the course. A minimum grade of 5 certifies the achievement of the minimal learning outcomes required for the course and the awarding of the corresponding study credits.

Date:

Course instructor: Silvia María González Fernández

Course instructors for applied activities: Silvia María González Fernández

Date of approval by the department:

Head of Department: Lucía Avella Camarero

Date of approval by the Faculty Council:

Dean, José Javier Borge Álvarez