

## COURSE: MANAGEMENT OF PROJECTS AND LABORATORIES

**SUBJECT:** Management

**MODULE:** Management

**PROGRAM:** University Master's Degree in Analytical Chemistry

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### GENERAL FEATURES \*

**Type:**  Basic Training  Compulsory  Elective

Master's thesis work,  Practicum

**Duration:** Semester

**Semester / s:** 1

**Number of ECTS credits:** 5

**Language / s:** Spanish, Catalan

### DESCRIPTION

**BRIEF DESCRIPTION AND JUSTIFICATION** (The meaning of the course in relation to the program. Between 100 and 200 words.)

The subject introduces the techniques of Project Management in a company. We work from the definition of the strategy and the organization to the techniques to guide the teams towards the defined objectives. The areas of management of a project and the main planning and control systems are studied. Project Management is treated in a quality environment and therefore, process management is used for the continuous improvement of the organization.

**COMPETENCES** (Of course you put in relation to the skills pre-assigned in the field.)

#### **Basic competences**

- CB6 - Have and understand knowledge which provides the ground or opportunity to be innovative in the development and/or application of ideas, often in a research context
- CB7 - Apply their knowledge and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study
- CB8 - Integrate knowledge and deal with the complexity of formulating judgments based on information which, being incomplete or limited, includes reflections on social and ethical responsibilities related to the application of their knowledge and judgments
- CB9 - Communicate conclusions, and the reasons that sustain them, to specialized and non-specialized audiences in a clear and unambiguous way.

#### **General competences**

- CG1 - Ability to lead, direct and manage projects in academic or business environments adapting to the structures, needs and ways of operation of each institution

#### **Specific competences**

- E9 - Demonstrate knowledge of project management and tools for planning, implementing and monitoring projects
- E10 - Ability to define tasks, assign resources, define costs and monitoring a project
- E12 - Ability to lead, direct and manage projects in chemistry according to the requirements of a quality system

\* These features should not be modified without the approval of the bodies responsible for academic higher-level structures (field, module and / or system).

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### ***Transversal competences***

T2 - Ability to lead and direct teams

**PREREQUISITES \*** (Modules, materials, disciplines or expertise needed to track the subject. Contain subjects that must have been completed can be made.)

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**CONTENTS** (Sections that make up the syllabus, to a second level of detail.)

1. Definition of a Project and Project Management.
2. Strategic analysis.
3. Life cycle of a project.
4. Areas of management of a project.
5. Systems of planning and control of a project.
6. Organization of the project team.
7. R + D + i projects

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### METHODOLOGY

**TRAINING ACTIVITIES** \* (Complete the table relating activities, workload in ECTS credits, and skills.)

Training Activities	ECTS	Competences
Sessions of exposition of concepts	1,1	E9, E10, E12, T2 / CB6, CB7, CG1
Sessions solving exercises, problems and cases	0,1	E9, E10, E12, T2 / CB6, CB7, CG1
Seminars	0,1	E9, E10, E12, T2 / CB8, CB9
Presentations	0,2	E9, E10, E12, T2 / CB8, CB9, CG1
Activities of personal study by students	3,3	E9, E10, E12, T2 / CB6, CB7, CB8
Evaluation activities (exams, monitoring controls ...)	0,1	E9, E10, E12/ CB9
<b>TOTAL</b>	<b>5</b>	

**TEACHING METHODOLOGY** (Justifying the teaching methods used in relation to the competences and contents of the course. Between 100 and 200 words.)

In the subject about 40 hours of classes are taught by the teacher in the classroom. Attendance at these classes represents approximately one third of the student's dedication to this subject.

Sessions of exposition of concepts are carried out with computer support. The presentation of the different topics is supported by the discussion and resolution of exercises and case studies. In the seminars the difficulties that the students have encountered are discussed, especially during the resolution of exercises and cases or the realization of works.

The sessions are developed in a participative way, maintaining a constant dialogue with the students.

The Blackboard platform is used so that the students have the basic and complementary material of the subject, as well as for the discussion and resolution of cases.

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### EVALUATION

**ASSESSMENT SYSTEM \*** (Complete the table relating evaluation methods, competences and weight in the course grade.)

Evaluation Methods	%	Competences
Final Exam	50%	E9, E10, E12, CB6, CB7, CG1
Monitoring activities	25%	E9, E10, E12, CB6, CB7
Projects and presentations	20%	E9, E10, E12, T2, CB8, CB9, CG1
Participation	5%	T2, CG1

**LEARNING OUTCOMES** (Explanation of the embodiments that allow the student skills assessment, relating them to the skills and methods of assessment.)

- The student must demonstrate knowledge of Project Management for the development and / or application of ideas, often in a research context [CB6]
- The student must demonstrate ability to solve problems and cases that arise in relation to the management of projects in different contexts [CB7].
- The student must demonstrate an understanding of the importance of project management and ethical behavior in relation to the exercise of their profession [CB8].
- The student must demonstrate the ability to communicate orally and in writing to communicate their knowledge, conclusions and reasons that support them in relation to project management [CB9].
- The student must demonstrate that he / she knows how to work and manage projects in a business and academic environment. [CG1]
- The student must demonstrate knowledge of tools for planning, management and monitoring of projects and activities carried out in a laboratory dedicated to Analytical Chemistry. [E9]
- The student must demonstrate his ability to define the different tasks that make up a project or that are developed in a laboratory, allocate the necessary resources for each of them and define the associated costs [E10].
- Ability to lead, direct and manage projects in chemistry contemplating the requirements of a quality system [E12]
- The student must demonstrate that he has acquired the skills to be a project manager in terms of leadership and team management [T2].

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### QUALIFICATION (Explanation of the computer system of the course grade.)

The grade of this course is obtained:

<b>Final exam</b>	50%
<b>Monitoring activities</b>	25%
<b>Projects and presentations</b>	20%
<b>Participation</b>	5%

**Monitoring activities** include works (exercises, problems and cases) that perform and deliver the students during the course.

Students do a **Project** of the subject including an oral presentation.

The **participation** includes attendance, initiative and the attitude shown by the student in relation to the teacher and their peers.

Final exam grades, monitoring activities and projects and presentations must be greater than or equal to 4 points to pass the course.

### ASSESSMENT OF THE COMPETENCES (Define calculation expressions for each competence and the relevant evaluation methods.)

Evaluation methods	Competences
Final exam	CB6, CB7, CG1, E9, E10, E12
Monitoring activities	CB6, CB7, CB8, CB9, CG1, E9, E10, E12, T2
Projects and presentations	CG1, E9, E10, E12, T2
Participation	T2

### BIBLIOGRAPHY (Recommended and accessible to students.)

- Project Management Institute (PMI), "Guía de los Fundamentos de la Dirección de Proyectos (Guía del PMBOK®)", 5ª edición, Global Standard, 2013.
- Norma ISO 21500:2013 "Directrices para la dirección y gestión de proyectos".
- Norma ISO 10006:2003 "Quality management systems - Guidelines for quality management in projects".
- Norma UNE 157001:2014 "Criterios generales para la elaboración formal de los documentos que constituyen un proyecto técnico".
- Norma UNE 166000:2006 "Gestión de la I+D+i: Terminología y definiciones de las actividades de I+D+i".
- Norma UNE 166001:2006 "Gestión de la I+D+i: Requisitos de un proyecto de I+D+i".
- Norma UNE 166002:2014 "Gestión de la I+D+i. Requisitos del Sistema de Gestión de I+D+i".

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- Guerra, L., "Gestión integral de proyectos", FC Ed.
- Amendola L.J., "Estrategias y tácticas en la dirección y gestión de proyectos.", Univ. Pol. Valencia, UPV Ed., 2006.
- Nokes y Greenwood, "La guía definitiva de la gestión de proyectos", Madrid, 2007

### **DOCUMENT HISTORY**

**PREVIOUS CHANGES** (You set the date and author / s, the most recent first)

September 2016 (Dra. Judith Báguena)

September 2015 (Dra. Judith Báguena)

September 2014 (Dra. Judith Báguena)

September 2013 (Dra. Judith Báguena)

July 2012 (Dra. Judith Báguena)

**LAST REVISION** (Indicate date and author / s.)

September 2017 (Dra. Judith Báguena)