UAB
Universitat Autònoma de Barcelona

Project Management

Code: 106562
ECTS Credits: 6

2025/2026

Degree	Type	Year
Artificial Intelligence	OB	3

Contact

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Teachers

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Teaching groups languages

You can view this information at the end of this document.

Prerequisites

There are none.

Objectives and Contextualisation

The specific goal of the course is to introduce the set of techniques and skills needed to design, plan and develop projects at a professional level in the fields of companies and organizations, particularly those related to Artificial Intelligence.

At the end of the course, students will be able to:

- Define the basic objectives of a project, carrying out a preliminary feasibility study; as well as to accurately define the scope of the project that the organization has finally decided on, using social, economic and environmental criteria.
- Identify and plan the various tasks required to implement a project, defining the relevant timeframe and allocation of resources, and also do that using the most appropriate software tools.
- Assess both costs and risks associated with the project; and consistently define the required quality standards, developing tools and methodologies to ensure compliance.
- Propose a viable methodology for monitoring and controlling the project during its execution, including the use of appropriate computer tools.

Furthermore, students must be able to work as a team in planning specific projects, and to comunicate within the team and with the organization, both in the form of oral presentations and written reports, in the different stages of the project planning.

Competences

- Act within the field of knowledge by evaluating the social, economic and environmental impact beforehand.
- Communicate effectively, both orally and in writing, adequately using the necessary communicative resources and adapting to the characteristics of the situation and the audience.
- Conceptualize and model alternatives of complex solutions to problems of application of artificial intelligence in different fields and create prototypes that demonstrate the validity of the proposed system.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Work cooperatively to achieve common objectives, assuming own responsibility and respecting the role of the different members of the team.
- Work independently, with responsibility and initiative, planning and managing time and available resources, and adapting to unforeseen situations.

Learning Outcomes

1. Communicate effectively, both orally and in writing, adequately using the necessary communicative resources and adapting to the characteristics of the situation and the audience.
2. Identify the social, economic and environmental implications of academic and professional activities for the field of knowledge.
3. Manage resources (human, economic, computational) throughout a projects lifecycle.
4. Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
5. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
6. Understand how to use project management tools in collaborative environments, as well as how to apply AI techniques to these tools.
7. Use Agile methodologies to manage the development of a project.
8. Work cooperatively to achieve common objectives, assuming own responsibility and respecting the role of the different members of the team.
9. Work independently, with responsibility and initiative, planning and managing time and available resources, and adapting to unforeseen situations.

Content

Unit 0. The field of AI and project management

Unit 1. Basics elements of project management: Major characteristics, project development cycle, approaches to project management

Unit 2. The initial phase of a project.

Unit 3. Project planning and scheduling: the analytical structure of a project and the development of a WBS. PERT and CPM networks: characteristics and use. Critical path, total duration, and slacks for non-critical tasks. Treatment of time uncertainty. Task planning and scheduling charts: Gantt chart. Specific software for time planning and management of projects.

Unit 4. Cost Planning and sustainability: cost estimations for a project. Monetary and intanglible costs.

Unit 5. Quality management and risk management: identification of the relevant quality criteria for a project, and preparation of the project's quality plan. Identification and measurement of possible sources of risk, as well as subsequent planning of sensible responses.

Unit 6. Controlling a project: methodologies to monitor forecasts made in project planning (scope, time, resources, costs, quality): from milestones to the use of standard ad-hoc computer software.

Throughout the development of the subject, various agile project development techniques will be considered (including Scrum, Kanban or Lean) as well as various tools for ideation (canvas, design thinking, prototyping) and IT tools for the assurance of collaborative work and in the management and control of projects

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
A. Theoretical lectures	18	0.72	6, 7, 3, 2
B. Classroom problems	12	0.48	6, 7, 2, 4
C. Laboratory sessions	12	0.48	6, 7, 4, 8
D.Oral presentations and discussion of cases	8	0.32	1, 5, 4, 8
Type: Supervised			
E. Tutorials	12	0.48	1, 6, 3, 5
Type: Autonomous			
F. Independent study	20	0.8	6, 2, 9
G. Designing, preparing and drafting the course projects	65	2.6	1, 7, 2, 5, 4, 8, 9

Based on PBL, the course combines several techniques to favour formative learning:

- Presentation of basic concepts and standard methodologies commonly used for project management.
- Practical classroom and laboratory classes, with the aim of consolidating its main concepts through the realization of practical cases.
- Teamwork throughout the semester, to define and plan a specific project ideated and proposed at the beginning of the course, which should be based on technological innovation and/or business information systems.
- Tutorials agreed between teachers and each of the work teams (supervised activity) to ensure the proper monitoring and development of the project.
- Oral and written presentations of progress reports of project development.

This approach merges individual learning, essential in any subject of study, with collaborative activities to ensure the quality of the team projects, thus consolidating the learning skills of each one of the team members.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
a. Individual submission of practical cases proposed during the course	15%	0	0	6, 9
b. Submission of reports regarding the different phases of the course team project	10%	0	0	1, 5, 8
c. Submission of the Final Project Management plan	35%	0	0	6, 7, 3, 2, 4, 8
d. Final exam	40%	3	0.12	1, 6, 3, 2, 5

The assessment of the course will be formative, thus carried out throughout the semester. It is based on the following learning evidence:

- Individual submission of practical cases proposed during the course.
- Submission of reports, both orally and in writing, regarding the different phases of the course team project.
- Submission of the final Project Management Plan for the course team project.
- A final exam carried out in the last week of the semester, to favour the individual consolidation of the whole content of the course.

The students' final grade will be obtained from the weighted sum of the assessments of the various tasks carried out during the course, considering specific weights for each of the four components:

N = 15% (individual submission of practical cases) + 10% (partial reports concerning the course project) + 35% (Final Project Management Plan) + 40% (final exam)

subject to the three following constraints: (1) each one of the components of the assessment must be a strictly positive value, (2) the individual rating obtained in the final report of the project must be equal to or higher than 4.5, and (3) the score obtained in the final exam is at least 4.0 (out of 10).

It must be taken into account that the marks obtained from teamwork during the course, as well as the final report of the project, will always be on an individual level, and thus will not necessarily match with the assessment of the work itself, since individual aspects such as the students' participation and will also be considered.

Important notes:

1. Students who have not passed the subject using the previous calculation, or who do not meet all the conditions to be able to do it, will have as final mark the lower value between 4.5 and the value of N above. A mark equal or greater than 3.5 entitles the student to participate in the retake process described below.

2. A student having not participated in any of the assessment activities will be considered "Not evaluable".

3. This subject does NOT offer the option for comprehensive evaluation.

Use of AI

In this course, the use of Artificial Intelligence (AI) technologies is permitted as an integral part of the development of the assignment, provided that the final result reflects a significant contribution from the student in terms of analysis and personal reflection. The student must clearly identify which parts were generated using such technology, specify the tools used, and include a critical reflection on how these tools influenced the process and the final outcome of the activity. A lack of transparency in the use of AI will be considered academic dishonesty and may result in a grade penalty for the activity or more severe sanctions in serious cases.

Retake Process

Students taking this exam and passing will get a grade of 5 for the subject. The students having not passed the retake exam will be graded using his/her final exam grade, and hence, will fail the course.

Bibliography

- Cobb, Anthony T. *Leading Project Teams : The Basics of Project Management and Team Leadership*, SAGE Publications, 2011. *ProQuest Ebook Central*, https://ebookcentral.proquest.com/lib/uab/detail.action?docID=1995175.
- Gido, J. & Clements, J.P. *Successful Project Management*. South-Western, 4th. Edition, 2009.
- Nicholas, J.M. *Project Management for Business and Technology*. *Principles and Practice*. Prentice-Hall, 2nd. edition, 2001.
- Paquette, Paul, and Milan Frankl. *Agile Project Management for Business Transformation Success*, Business Expert Press, 2016. *ProQuest Ebook Central*, https://ebookcentral.proquest.com/lib/UAB/detail.action?docID=4307174.
- Pries, Kim H., and Jon M. Quigley. *Scrum Project Management*, Taylor & Francis Group, 2010. *ProQuest Ebook Central*, https://ebookcentral.proquest.com/lib/UAB/detail.action?docID=589930.
- Rosen, Anita. *Effective IT Project Management : Using Teams to Get Projects Completed on Time and Under Budget*, AMACOM, 2004. *ProQuest Ebook Central*, https://ebookcentral.proquest.com/lib/UAB/detail.action?docID=243019.
- Silvius, Gilbert, et al. *Sustainability in Project Management*, Taylor & Francis Group, 2012. *ProQuest Ebook Central*, https://ebookcentral.proquest.com/lib/UAB/detail.action?docID=906949.

Software

Free and open source software to be defined based on the interest of the students' teams

Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this link. To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	711	English	first semester	afternoon
(PLAB) Practical laboratories	711	English	first semester	afternoon

(PLAB) Practical laboratories	712	English	first semester	afternoon
(TE) Theory	71	English	first semester	afternoon