

Degree programme	Type	Course
Computer Engineering	OB	4

Contact lecturer

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Group languages

You can consult this information at the [end](#) of the document.

Prerequisites

Those defined in the permanence regime of the UAB, within the section on enrolment progression. Being a fourth-year subject, it is necessary to have passed at least all the subjects in the first year and a total number of 120 credits from the first three years.

Objectives

- Know and practice:

- Specific techniques (Theory / Simulations in class): Planning, Estimation, HR Management, Communication
- Management Methods
- Tools (Laboratory practices)

- To be able to decide which methods and techniques to use in each situation.

- On the other hand, in the part of practices, it is intended that part of the concepts presented are related to the development of the Final Degree Project.

Learning outcomes

1. Know and understand the methodologies involved in the evaluation of computer applications and systems.
2. Know and understand the project planning and management methodologies used in creating computer

applications and systems.

3. Identify the possible ethical conflicts that may be derived from a project and, should they exist, report on the associated risks.
4. Know and understand the methodology for planning projects (identification of objectives, identification of tasks, technical and economic feasibility study, work plan, etc).
5. Evaluate and explain, if necessary, the impact of the project on the prevention and solution of environmental and energy problems.
6. Analyse and explain any security, health or hygiene risks in a project, indicating the measures established to avoid or minimise them.
7. Draft a list of technical conditions for a computer project.
8. Know and understand the methodology of project planning (identification objectives , identifying tasks, technical and economic feasibility, work plan, etc).
9. Know and understand the methodologies of project management.
10. Identify the relevant parameters to measure, evaluate and plan computing tasks.
11. Know and understand the techniques to be applied to the evaluation, valuation, assessment and preparation of studies and reports on computer applications and systems.
12. Know and understand the techniques costing , budgeting , human resource management , organization of time and resources necessary for the proper planning and development of a project.
13. Identify the regulations and provisions applicable to a project.
14. Identify, manage and resolve conflicts.
15. Adapt to multidisciplinary and international environments .
16. Communicate efficiently, orally or in writing, knowledge, results and skills, both in the professional environment and before non-expert audiences.
17. Use efficiently ICT communication and transmission of ideas and results.
18. Work cooperatively.
19. Accept and respect the role of the various team members, and its different levels of dependence.

Contents

- Topic 1. Introduction Project Management
- Topic 2. Management of Human and Gender Resources
- Topic 3. Project Life Cycle
- Topic 4. Selection of Projects
- Topic 5. Time Management
- Topic 6. Cost Management and Sustainability
- Topic 7. Management of Communications
- Topic 8. Project Scope Management
- Topic 9. Management of Integration
- Topic 10. Risk management
- Topic 11. Quality Management
- Topic 12. The figure of the Project Manager

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
Preparation of activities	22	0.88	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19
Study for exams, practical problems, preparation of practices, extension of subjects with the bibliography	76	3.04	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19
Theory sessions	26	1.04	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17
Practical sessions	24	0.96	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19

Format Course:

Lessons: Theoretical topics.

- Self-preparation
- Self-control
- Consultations / Debates

Techniques: Skills development.

Introduction

Review of concepts

Simulation

Roles

Practices:

Presentation of management tools and project planning.

Presentations in class.

Team work and exercises to work autonomously and to solve and discuss in the laboratory sessions.

Purpose of the activities:

- Theory: Complete overview.
- Techniques: Practice the main necessary techniques and improve skills.
- Practices:
 - Master management tools and project planning.
 - Know and practice the main aspects of the management of a project.
 - Facilitate the tasks that students should perform when they develop their Final Degree Project.

Use of AI:

In this subject, the use of Artificial Intelligence (AI) technologies is permitted as an integral part of the development of the work, provided that the final result reflects a significant contribution of the student in the analysis and personal reflection. The student must clearly identify which parts have been generated with this technology, specify the tools used and include a critical reflection on how these have influenced the process and the final result of the activity. The lack of transparency in the use of AI will be considered a lack of academic honesty and may lead to a penalty in the grade of the activity, or greater sanctions in serious cases.

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

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
Cooperative exercises	7,5%	0	0	4, 8, 9, 12, 14, 16, 17, 18, 19
Practices	50%	0	0	1, 2, 4, 7, 8, 10, 11, 12, 16, 18, 19
Theory exams	37,5%	2	0.08	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

Exercises of techniques	5%	0	0	8, 9, 10, 11, 12, 13, 14, 15, 18, 19
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Calculation of the final grade:

- Theory (minimum 5 out of 10), which corresponds to 50% of the final base note.

The theory grade will be the weighted average of the parts assessed.

Exams of evaluation of the theoretical knowledge and techniques of the subject (75%):

- 50% - 1th EXAM (October): Project Feasibility Study - Individual.
- 50% - 2nd EXAM (January, date provided by the school): Implementation and Monitoring of the Project - Individual.
- In case of failing one of the parts with less than 4, or wanting to improve the grade: 100% Exam Repeat (date provided by the school). It will be necessary to perform an examination of both parts, regardless of whether you have failed one or both exams. - Individual.
- MINIMUM GRADE FROM PARTIALS TO MAKE AVERAGE: 4

Techniques exercises (10%): Exercises proposed in class, which must be delivered on the day indicated by the teacher. The exercises are not compulsory, but they are highly recommended and necessary to qualify for honors. Cannot be repeated. - Individual.

Cooperative exercises (15%): Exercises in class, which must be delivered on the day indicated by the teacher. The exercises are not compulsory, but they are highly recommended and necessary to qualify for honors. Cannot be repeated. - In a group.

Attendance at extraordinary activities: 0,2 points to add to the final grade of theory for attendance at each of the conferences or activities proposed. - Individual.

- Practices (minimum 5 out of 10), which corresponds to 50% of the final base note. - In a group.

- Attendance at all practice sessions is mandatory.
- Closed laboratory practices that require preparation and previous work by students.
- The final note of practices will be the weighted average of the different practices. It is necessary to submit them all in order to pass the subject.
- The practices cannot be repeated.
- If the practices have been approved on a previous course, it will not be necessary to repeat them.

The dates of continuous evaluation and delivery of work will be published on the virtual campus and may be subject to programming changes for reasons of adaptation to possible incidents.

Always be informed, on the virtual campus, about these possible changes, since this is the platform for the exchange of information between teachers and students, and it is where the assessable content of the subject will be published.

For each assessment activity, a place, date and time of revision in which the student can review the activity with the teacher will be indicated. In this context, claims can be made on the activity grade, which will be assessed by the professor responsible for the subject.

If the student does not show up for this revision, this activity will not be reviewed later.

With honors: The honor grade can be obtained with a mark average superior or equal to 9.0. and having completed and passed all the exercises in the theory classes. Due to the fact that there is a limited number of honor grades that can be given by group, they will be awarded in order of note from major to minor. Students who have to retake any exams are not eligible for a distinction. In case of a tie between several students, additional work can be requested.

Single evaluation: This subject does NOT provide for the single evaluation system.

Without prejudice to other disciplinary measures deemed appropriate, and in accordance with current academic regulations, irregularities committed by a student that may lead to a variation of the qualification will be qualified with a zero (0), and the work is considered as not handed in and will not be counted when evaluating the practical grade. The evaluation activities qualified in this way and by this procedure cannot be repeated. If it is necessary to pass any of these assessment activities to pass the subject, this subject will be failed directly, with no opportunity to repeat it in the same course.

These irregularities include, among others:

- The total or partial copy of a practice, report, or any other evaluation activity.
- Let anyone else copy.
- Present a group work not done entirely by the members of the group.
- Present as own, materials made by a third party, even if they are translations or adaptations, and in general works with non-original and exclusive elements of the student.
- Have communication devices (such as mobile phones, smart watches, etc.) accessible during the theoretical assessment tests-individual practices (exams).

In case of failing the subject because any of the assessment activities does not reach the minimum grade required, the numerical score of the file will be the lowest value between 4.5 and the weighted average of the grades. With the exceptions that the qualification of \"not evaluable\" will be granted to students who do not participate in any of the assessment activities, and that the numerical score of the record will be the lower value between 3.0 and the weighted average of the grades if the student has committed irregularities in an act of evaluation (and therefore the pass for compensation will not be possible).

Bibliography

Reference bibliography:

- Caamaño, J. Eduardo. (2016). Project management práctico : técnicas, herramientas y documentos. (4ª ed. rev.) Deniedbooks . Biblioteca UAB - [\[Online\]](#)
- Nicholas, John M. & Steyn, Herman. (2021). Project management for engineering, business Nich and technology. (6th ed.) Routledge / Taylor & Francis Group. Biblioteca UAB - [\[Online\]](#)

Basic bibliography:

- The standard for project management and a guide to the project management body of knowledge (PMBOK guide) . PMBOK guide . Project Management Institute, entitat editora . 2021 . Biblioteca UAB
- Project management Robert J. Collins, editor . Collins, Robert J., 1950-2011 . Biblioteca UAB
- Project management / Gary R. Heerkens . Heerkens, Gary, author. 2002 . Biblioteca UAB
- Guía de los Fundamentos de la Dirección de Proyectos (cuarta edición). (Guía del PMBOK) Norma Nacional Americana ANSI / PMI. 2009.
- Scrum Guide. <http://www.scrumguides.org>
- Scrum y XP desde las trincheras Kniberg, Henrik. 2007.
<http://www.proyectalis.com/wp-content/uploads/2008/02/scrum-y-xp-desde-las-trincheras.pdf>
- William R. Duncan (Director of Standards), A Guide to the Project Management Body of Knowledge, PMI Standards Committee, Project Management Institute. 1996.
- Robert J. Muller, Productive Objects, an Applied Software Project Management Framework, Morgan Kaufmann Publishers, Inc. 1998.
- Project & Program Risk Management, A guide to managing project risks & opportunities. R. Max Wideman, editor, 1992.
- Philip Metzger & John Boddie, Managing a Programming Project, Prentice Hall, 1996.

Complementary bibliography:

- Software Measurement Guidebook (Revision 1), Software Engineering Laboratory Series. 1995.
- Thomas C. Belanger, The Complete Planning Guide for Microsoft Project, Butterworth-Heinemann, 1996.

- Javier Garcia Cabañes, Técnicas de Investigación Operativa, Paraninfo, 1990.
- Roger S. Pressman, Software Engineering, a Practitioner's Approach, McGRAW-HILL (terceraedició), 1993.
- Roger S. Pressman, Ingeniería del Software, un Enfoque Práctico, McGRAW-HILL (segona edició), 1989.
- Richard Fairley, Ingeniería de Software, McGRAW-HILL.
- Ian Sommerville, Ingeniería de Software, Addison-Wesley.
- Christian W. Dawson, Projects in Computing and Information Systems, a Student's Guide, Addison-Wesley (segona edició), 2009.
- Schwaber, Ken & Sutherland, Jeff. (2020). The Scrum guide : the definitive guide to Scrum : The rules of the game.

Recommended URLs:

- IA para Gestión de Proyectos: La Guía Practica Para Gestionar Algoritmos, No Tareas. Eric Martina. 2026
- Gestió de Projectes:
<https://thedigitalprojectmanager.com/es/libros-gestion-proyectos-20-mejores-libros-para-gerentes-proyect>
- Project Management Institute: <https://www.pmi.org>
- Guide to the Project Management Body of Knowledge: <https://www.pmi.org/store>
- Software Measurement Guidebook de la NASA.

Software

SUITE MICROSOFT OFFICE:

- Word, Excel, PowerPoint and Project.
- <https://www.microsoft.com/es-gq/store/collections/officesuites>

CANVAN:

- Project planning.
- <https://www.canva.com/education/students>

TRELLO:

- Trello is a client and web interface project management software for iOS and android for organizing projects.
- <https://trello.com>

MONDAY PROJECT MANAGEMENT:

- Project management software, from simple to complex projects, with monday.com.
- <https://monday.com>

AI TOOLS:

- ChatGPT / Claude / Gemini (General Support and Reasoning)
- Microsoft Copilot / Google Workspace (Corporate Productivity)
- Cursor / Claude Code / Lovable (Software Development)
- Make / n8n / Power Automate and Dynamics 365 - Microsoft (Process Automation)
- NotebookLM / Notebook - Microsoft (Knowledge Management and Study)

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through this [link](#). To access the information, you will need to enter the course CODE

Type of teaching	Group	Language	Semester	Shift
(TE) Theory	410	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	411	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	412	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	413	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	414	Catalan	first semester	afternoon
(TE) Theory	415	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	415	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	416	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	417	Catalan	first semester	afternoon
(PLAB) Practical laboratories	418	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	419	Catalan	first semester	morning-mixed