

Degree	Type	Year
2500895 Electronic Engineering for Telecommunication	OB	3
2500898 Telecommunication Systems Engineering	OB	3

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Teachers

Albert Crespo Yepes

Teaching groups languages

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Prerequisites

No prerequisite is required for the students of the degree.

Objectives and Contextualisation

The objective is to know and use the general techniques of management of engineering projects, including all the phases of the projects and the regulatory and legislative aspects related to the professional field of telecommunications, as well as computer tools oriented to the management of projects .

Competences

Electronic Engineering for Telecommunication

- Apply basic elements of economics and human resource management, organisation and planning of projects.
- Apply the necessary legislation in the exercise of the telecommunications engineer's profession and use the compulsory specifications, regulations and standards
- Develop ethics and professionalism.
- Develop personal work habits.
- Draft, develop and sign projects in the field of telecommunications engineering designed to conceive, develop or exploit electronic systems

- Manage activities involved in projects in the field of telecommunications.
- Work in a team.

Telecommunication Systems Engineering

- Apply basic elements of economics and human resource management, organisation and planning of projects.
- Apply the necessary legislation in the exercise of the telecommunications engineer's profession and use the compulsory specifications, regulations and standards.
- Develop ethics and professionalism.
- Develop personal work habits.
- Direct the activities object of the projects in the field of telecommunication.
- Draft, develop and sign projects in the field of telecommunications engineering that, depending on the speciality, are aimed at the conception, development or exploitation of telecommunication and electronic networks, services and applications.
- Work in a team.

Learning Outcomes

1. Adapt to unforeseen situations.
2. Ask, write and present a feasibility study of a project.
3. Assume and respect the role of the different members of a team, as well as the different levels of dependency in the team.
4. Assume social, ethical, professional and legal responsibility, if applicable, derived from professional exercise.
5. Conceive, deploy and manage a mini project in the field of telecommunications.
6. Conceive, implement and manage a miniproject in the field of telecommunications.
7. Define and use basic concepts related to project management.
8. Define and use the basic concepts related with project management.
9. Draft documents in the field of telecommunications engineering as a format and established standards.
10. Draft documents in the field of telecommunications engineering using the established and standards.
11. Identify and interpret telecommunications standards and regulations in the national, European and international fields.
12. Identify and interpret the rules and regulation of telecommunications at the national, European and international levels.
13. Identify, manage and resolve conflicts.
14. Make one's own decisions.
15. Plan, draft and present a project feasibility study.
16. Prevent and solve problems.
17. Use computerised project management applications to support the development and exploitation of networks, services and applications.
18. Using IT project management applications to support the development and operation of networks, services and applications.
19. Work cooperatively.
20. Work in complex or uncertain surroundings and with limited resources.

Content

- Principles, tools and techniques of project management
- Professional colleges and professional field
- Legislation and regulatory bodies

- ICTs Projects (common telecommunication infrastructures)
- Patens, intellectual property and its legislation.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Theory lectures and seminars	22	0.88	1, 3, 4, 6, 8, 10, 11, 13, 15, 16, 17, 19
Type: Supervised			
Team project	12	0.48	1, 3, 6, 8, 10, 11, 13, 15, 16, 17, 19
Practices	9	0.36	1, 3, 6, 8, 10, 11, 13, 15, 16, 17, 19
Type: Autonomous			
Study	30	1.2	1, 8, 10, 11, 13, 15, 17, 19
Team working	25	1	1, 6, 8, 10, 15, 16, 17

The teaching methodology includes classroom training activities, seminars, practices and the realization of a team project. These activities should be complemented by independent personal work by the student. The team project will consist of developing a project following the methodology described in the subject, with the additional knowledge relevant to the subject of the specific project. The students will be organized in work teams, and each team will develop a different project, with a tutor. The described methodology can be adjusted according to academic or health needs.

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
1st Assessment of theory and seminars (A)	20%	3	0.12	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20
2nd Assessment of theory and seminars (B)	20%	3	0.12	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20
Final recovery exam	40%	3	0.12	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20
Practices (E)	20%	9	0.36	1, 3, 5, 6, 9, 10, 13, 14, 16, 17, 18, 19, 20
Simanars	5%	4	0.16	4, 10, 11

Team project (C, D)	35%	30	1.2	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
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A) Scheduled evaluation process and activities

The assessment of the degree of acquisition of skills by students is carried out with continuous assessment, in accordance with the following criteria:

First partial exam (20%) written theory and seminars, which may include practical exercises related to the contents developed. It will take place towards the middle of the teaching period. The weight is 20% of the grade of the subject.

Second partial exam (20%) written on theory and seminars, which may include practical exercises related to the contents developed, questions of the project in team and / or of the seminars given in the classroom in theory schedule. It will take place at the end of the teaching period. The weight is 20% of the grade of the subject.

Final exam (40%) recovery, which will include all the contents of the two partial exams, as well as possible questions from the classroom seminars and teamwork.

Team project (35%)

Participation in the team project. It will be evaluated based on the individual participation of each student in the assigned project team, with a weight of 10%. In order to monitor the individual participation of each student, as well as that of the group in general, partial deliveries of the work carried out must be made, which will be indicated in the Virtual Campus of the subject.

Report and presentation of the project as a team. The structure, contents, organization and results of the project report and individual participation in the final presentation of the project will be evaluated. Weight of 20%.

Internships (20%)

They will be evaluated based on the attendance and the corresponding reports of each of the 3 practices. The weight of this activity in the final grade is 25%. Internships are mandatory, both for reporting and attending sessions.

Seminars (5%)

Participation in the seminars will be evaluated, especially the seminar dedicated to attending the telecommunications day. A document / report related to the contents of the talks and activities of the event in question must also be submitted. If it is not possible to attend the telecommunications day, an activity related to the two seminars that will be held in the classroom during tuition hours will be proposed. In addition, the contents of the seminars held in the classroom can be included as the subject of the exams.

EVALUATION:

In order to pass the course through continuous assessment, a minimum grade of 3.5 will be required in each separate midterm exam, and a minimum grade point average of both of 5 points. If these requirements are not met, the student must take the final exam, which will weigh 45% (20% of the 1st part + 20% of the 2nd part + 5% of seminars). In the event that the student does not get a grade equal to or higher than 4.5 in the final exam, it will be suspended from the subject.

You will also need to get a minimum grade of 5 points in the team project. In addition, attendance at PAUL (Classroom Internships) hours will be mandatory, and participation will be taken into account. If the student does not meet these requirements, he will be suspended from the subject as teamwork is not a recoverable activity.

You will also need a minimum average mark of the internship part of 5 points. This part includes the realization and compulsory attendance of the 3 practices in the integrated laboratories. Failure to attend an internship session without just cause will result in the internship being suspended. The student will have to do an alternative practice to recover it. If the student does not meet these requirements, he will be suspended from the subject.

The part of the seminars can be done by attending the telecommunications day, or alternatively another equivalent activity will be proposed for people who cannot attend. There will also be 2 more seminars in the classroom in theory hours, the contents of which will be included as part of the theory exam syllabus.

Completing the seminar part will be mandatory to pass the continuous assessment, even if the requirements of the other assessment activities are met. If these requirements are not met the student will have to do a recovery activity of this part, which will be proposed given the case.

The weighted overall grade for all assessable activities must be at least 5 points.

Continuing Assessment Note = 40% midterm exams + 5% seminars + 35% teamwork + 20% internships

Note Evaluation by Final Exam = 45% final exam + 35% team project + 20% internships

For academic needs, and according to the development of the course, the evaluation procedures may be adjusted by the teacher responsible for the subject.

B) Scheduling of evaluation activities

The schedule of the two partial exams will be made public through the Virtual Campus and on the website of the School of Engineering, in the exams section. It is expected to take the written exams in the middle and end of the semester, they may be outside the regular schedule of the subject.

C) Recovery process

The student can take the recovery as long as he / she has taken a set of activities that represent a minimum of 60% of the total grade of the subject and meets the requirements indicated in the previous section. In accordance with the coordination of the Degree and the management of the School of Engineering, the following activities cannot be recovered:

- Teamwork (35%)

D) Procedure for reviewing grades

For each assessment activity, a place, date and time of review will be indicated in which the student will be able to review the activity with the teacher. In this context, claims may be made on the grade of the activity, which will be evaluated by the teacher responsible for the subject. If the student does not appear for this review, he / she must notify before the indicated date. No revisions will be made after the set date.

E) Qualifications

Honors. Granting an honorary enrollment grade is the decision of the faculty responsible for the subject. UAB regulations state that MHs can only be awarded to students who have obtained a final grade equal to or higher than 9.00. Up to 5% MH of the total number of students enrolled can be awarded.

Not Evaluable. A student will be considered non-assessable (NA) if he / she has not presented in a set of activities whose weight is equivalent to a minimum of two thirds of the total qualification of the subject.

Final grade for assessable students. To pass it is necessary that the evaluation of each of the parts exceeds the required minimum grade and that the total evaluation, taking into account the weights of each activity, has a grade equal to or higher than 5. In case of not exceeding the subject, the numerical grade of the transcript will be the lowest value between 4.5 and the weighted average of the grades.

F) Irregularities on the part of the student, copying and plagiarism

Without prejudice to other disciplinary measures deemed appropriate, irregularities committed by the student that may lead to a variation in the grade of an assessment act will be graded with a zero. Therefore, copying, plagiarism, cheating, copying, and so on. in any of the assessment activities it will involve suspending it with a zero. Assessment activities qualified in this way and by this procedure will not be recoverable. If it is necessary to pass any of these assessment activities to pass the course, this course will be suspended directly, without the opportunity to retake it in the same course. The final grade that will be given will be the one that results from the corresponding weights of each part, but at most a final grade of the subject of 3 points.

H) Evaluation of repeating students

From the second enrollment, the evaluation of the subject will consist of a synthesis test, plus the mark corresponding to the activities of teamwork and practices obtained the first time that the student has enrolled in the subject. . Therefore, the student will only have to recover the part of exams (40% in total) and seminars (5%). The grade will be calculated according to the weights established for each of the activities. In order to be eligible for this differentiated assessment, the repeating student must ask the teacher explicitly by e-mail no later than 4 weeks after the start of the classes indicating for which of the activities he wants to be keep the note obtained above.

Bibliography

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[Fundamentals of project management / James P.Lewis](#)

[La Gestión de proyectos / Jeff Davidson ; traducción: M^a Amparo Sánchez Hoyos](#)

[A Guide to the project management body of knowledge \(PMBOK® guide\)](#)

[Infraestructuras comunes de telecomunicaciones para el acceso a los servicios de telecomunicación en el interior de las edificaciones \[Recurs electrònic\] : Normas UNE y legislació / AENOR](#)

[Libro blanco del hogar digital y las infraestructuras comunes de telecomunicaciones / Telefónica](#)

[Microsoft Project 2013 step by step / Carl Chatfield, Timothy Johnson](#)

[Normativa de las infraestructuras comunes de telecomunicaciones : infraestructuras de acceso ultrarrápidas y hogar digital Real Decreto 346/2011, nuevo Reglamento de ICT / José Manuel Huidobro Moya,](#)

[Project management for business, engineering, and technology : principles and practice ; John M. Nicholas, Herman Steyn](#)

[Project management for engineering, business and technology John M. Nicholas, Loyola University Chicago, Herman Steyn University of Pretoria](#)

Software

Microsoft Project (v2013 to 2019)

Language list

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	311	Catalan	first semester	morning-mixed
(PAUL) Classroom practices	312	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	311	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	312	Catalan	first semester	afternoon
(PLAB) Practical laboratories	313	Catalan	first semester	afternoon
(PLAB) Practical laboratories	314	Catalan	first semester	morning-mixed
(TE) Theory	310	Catalan	first semester	morning-mixed