

**COURSE DATA****Data Subject**

<b>Code</b>	34820
<b>Name</b>	Degree final project in Electronic Engineering for Telecommunications
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	12.0
<b>Academic year</b>	2023 - 2024

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1402 - Degree in Telecommunications Electronic Engineering	School of Engineering	4	Annual

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1402 - Degree in Telecommunications Electronic Engineering	21 - Degree Final project in Telecommunications electronic engineering	End Labour Studies

**Coordination**

<b>Name</b>	<b>Department</b>
SORET MEDEL, JESUS	242 - Electronic Engineering

**SUMMARY**

The Final Project is an original exercise performed individually and present and defend in front of a university tribunal, consisting of a project in the field of telecommunication electronics engineering, professional in nature which synthesize and integrate the skills acquired in the education program. The Final Project is proposed as a factor enabling the students to increase their skills, with their personal work done under the guidance of a supervisor, comprehensively covering the skills acquired during their studies.

The type of project to be developed can be very variable, but always within the guidelines set by the objectives and tasks set for the Graduated degree. In any case, we can say that the ultimate aim is to apply the skills acquired during the studies to the activity of telecommunication electronics engineering.



The organization and evaluation of the Final Project is regulated by the Reglament de Treball Fi de Grau, approved by the Council of Government of the University of Valencia and mandatory instructions developed by the Escola Tècnica Superior d'Enginyeria of the University of Valencia ETSE-UV.

## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

To carry out the Bachelor Thesis, it will be required to have passed 180 ECTS of the curriculum, including all subjects scheduled in the first two years of the degree and the course "Project Management"

## OUTCOMES

### 1402 - Degree in Telecommunications Electronic Engineering

- G3 - Acquisition of the knowledge of the basic and technological subjects that allows students to learn new methods and theories and endows them with the versatility to adapt to new situations.
- G4 - Ability to solve problems with initiative, decision-making and creativity, and to communicate and transmit knowledge, abilities and skills, understanding the ethical and professional responsibility of the activity of a telecommunications technical engineer.
- G5 - Knowledge to carry out measurements, calculations, assessments, evaluations, loss adjustments, studies, reports, task planning, and other analogous work in the specific field of telecommunications.
- G8 - Knowledge and application of basic elements of economics and human resource management, project organization and planning, and legislation, regulations and norms in telecommunications.
- G9 - Ability to work in a multidisciplinary environment and in a multilingual group and to communicate, in writing and orally, knowledge, procedures, results and ideas related to telecommunications and electronics.
- G6 - Ability in the handling of specifications, regulations and norms of compulsory compliance.
- G7 - Ability to analyze and assess the social and environmental impact of technical solutions.
- G2 - Knowledge, understanding and ability to apply the legislation required in the development of the profession of Telecommunications Technical Engineering and ability in the handling of specifications, regulations and norms of compulsory compliance.



- FG1 - Original exercise to carry out individually and present and defend before a university tribunal, consisting of a project of professional nature in the field of specific technologies of telecommunication engineering, which synthesizes and integrates the skills acquired in the education program.
- G1 - Ability to write, develop and sign projects in the field of Telecommunication Engineering aimed - according to the knowledge acquired in section 5 of CIN/352/2009 regulation - at the conception and the development or the exploitation of networks, services and applications of telecommunications and electronics.

## LEARNING OUTCOMES

Learning outcomes of the Bachelor Thesis (FR1) are:

1. The writing and developing of projects in the field of Telecommunication Engineering (G1, G2, G3, G4, G5, G6, G7, G8, G9).
2. Ability to calculate process and project costs (G8).
3. The understanding of the ethical and professional responsibilities and the impact of engineering solutions in the social and environmental context (G3, G6, G7).
4. Effective communication skills using professional vocabulary in meetings, presentations and written documentation (G9)
5. Ability to manage information and the use of Information and Communications Technologies (G3,G5)
6. Planning and organizational skills (G5).
7. Critical thinking skills, creativity and decision-making (G4, G5)
8. To be able to gather and interpret information and make judgments on social, scientific, technological or ethical issues (G2, G4, G6, G7)
9. Learning skills to continue and update the training throughout working life with a high degree of autonomy (G3)

In addition to the specific objectives mentioned above, during the development of the TFG, it will be encouraged the development of several generic skills, among which we can include: the analysis and synthesis of problems related to ICT, the argument from rational and logical criteria, correct expression, development of problems in a systematic and organized way, personal work, the correct distribution of time and, finally, the ability to work in groups.

## DESCRIPTION OF CONTENTS

**1. Bachelor Thesis in Telecommunication Electronics Engineering**

The Bachelor Thesis is an individual work presented to a university committee, consisting of a professional project in the field of Telecom Electronics Engineering, which synthesizes and integrates the skills learned during the degree.

The Bachelor Thesis is presented as an element that allows students to increase their skills, with a personal work done under the supervision of a faculty member that covers the skills acquired during their studies.

The type of project to be developed can be very variable, but always within the guidelines given by the objectives and tasks set for the Bachelor degree. In any case, we can say that the final aim is to apply the skills acquired in the Telecom Electronics Engineering degree.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Graduation project		100
Development of a final project	300,00	0
<b>TOTAL</b>	<b>300,00</b>	

**TEACHING METHODOLOGY**

Students must develop a project under the supervision of a faculty member involved in this degree. Both the advisor and the student can propose the work. In any case, the advisor will approve the objectives to be achieved in the project and will ensure that the student work is designed to assess the achievement of the skills set out in the objectives of the Telecom Electronics Engineering degree (G1, G2, G3, G4, G5, G6, G7, G8, G9, FG1).

Student and advisor will be in regular contact. In any case, the advisor must maintain a minimum of two meetings with the student, one to set the objectives of the project and another during the preparation of the final document, to assess the level of fulfillment of the objectives. However, if they consider it appropriate, additional meetings may be conducted to analyze the evolution of the work.

The Bachelor Thesis can be carried out in an institution external to the UVEG. In any case, always under the approval and supervision of a faculty member of the UVEG.

The student will be involved in all the stages of the project. However within large teams is normal a tasks division in which some aspects of a project are carried out by other team members or even other groups. In this case, the student must explain in the final report these matters indicating his direct or indirect participation in the different phases of the work.





## EVALUATION

The organization and evaluation of the Final Project (FP) is regulated by the Regulation approved by the Council of Government of the University of Valencia and mandatory instructions developed by the Escola Tècnica Superior d'Enginyeria of the University of Valencia ETSE-UV.

The Final Project should be defend in public session in a court composed of the tutor college student and two faculty members from areas of knowledge related to the degree appointed by the Commission of the FP of the degree (G1, G2, G3, G4, G5, G6, G7, G8, G9, FG1).

The student will have 15 minutes to present to the court the work developed, and then the court members will discuss with the student aspects considered relevant for their work. After the defense, the court will constitute the qualifying committee and proceed to qualify the project following the schedule of the Commission of the FP of the degree. Basically, this scale indicates that the court together, evaluated up to 80% of the student's grade divided into the following aspects:

- Scientific-technical quality (40%)
- Quality of documentation (20%)
- Presentation and defense (20%)

In addition, the tutor shall deliver a specific assessment of the work done by the student to complete 20% of the grade. This report, evaluated between 0 and 10 points, shall contain the following assessments:

- Scientific-technical quality of work performed
- Quality of memory
- Attitude of students

In order to be able to average, a minimum grade of 5.0 / 10 must be obtained in each of the parts.

Moreover, students in mobility programs may make the FP in the target center. In that case, the project will have to be approved by the exchange coordinator of the degree, by delegation of the Commission of FP, assigning a UV academic tutor. In case that the student undertake an FP defense in the target center and can demonstrate the competence of public presentation, the FP Commission will delegated score recognition the exchange coordinator of the degree. Otherwise, there will be a public defense in UV on the same basis as other students, recognizing the portion corresponding to work and the memory submitted in target center, weighing destination and the corresponding part of the public defense of the UV.

The three members sign a record which shall contain work numerical rating. The evaluation shall follow the Regulations ratings the University of Valencia. At the time of writing this teaching guide, the current regulations are approved by the Governing Council of the UVEG of January 27, 2004, adjusted as provided for that purpose by the Royal Decrees 1044/2003 and 1125 / 2003. It basically states that numerical grades are 0-10 with one decimal and to which one must add the corresponding qualitative rating to the following scale:



- From 0 to 4.9: "Not passed"
- From 5 to 6.9: "Passed"
- From 7 to 8.9: "Outstanding "
- From 9-10: "Excellent " or "Excellent with Distinction"

In any case the evaluation will be submitted to the statements of "Reglament d'avaluació i qualificació de la Universitat de València per a títols de Grau i Màster".

## REFERENCES

### Basic

- Project Management Institute, "A Guide to the Project Management Body of Knowledge", 4th Ed., Project Management Institute. 2008. ISBN 1933890517
- Meredith, J.R; Mantel, S,J (Jr.) "Project Management: A Managerial Approach ". 7th Ed. John Wiley & Sons, Inc. 2008. ISBN 0470226218
- Desmond, C.L. Project Management for Telecommunication Managers". Kluwer Academic Publishers. 2004. ISBN 1402077289

### Additional

- Gómez, J. F; Coronel, A.J; Martinez de Irujo, L; Lorente, A. "Gestión de proyectos". FC Editorial. Madrid, (2000). ISBN: 8428317747.
- Grashina M.N; Newell M.W, Preguntas y Respuestas Sobre La Gestión de Proyectos, Editorial Gestión 2000, (2005). ISBN: 8480886864
- Domingo Ajenjo, A. Dirección y Gestión de Proyectos, un enfoque práctico. Editorial Rama, (2005). ISBN: 9701511301.