

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

<b>Code</b>	34909
<b>Name</b>	Degree final project in Telematics Engineering
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	12.0
<b>Academic year</b>	2022 - 2023

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. Period year</b>
1403 - Degree in Telematics Engineering	School of Engineering	4 Annual

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1403 - Degree in Telematics Engineering	21 - Degree Final project in Telematics engineering	End Labour Studies

**Coordination**

<b>Name</b>	<b>Department</b>
FELICI CASTELL, SANTIAGO	240 - Computer Science

**SUMMARY**

The Bachelor Thesis is an original work performed individually that must be presented and defended to a university committee. It will consist of a project in the area of the specific technologies covered in the degree and will have a professional character. It will synthesize and integrate the skills acquired in the Telematics Engineering degree.

Dedication scheduled for this course is 20 attending hours (19 hours scheduled tutorials, TFG Defense 1 hour) and 280 non-attending hours (student's personal work).

**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 "Projectos "

## **COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)**

### **1403 - Degree in Telematics 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.
- 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.
- FG1 - Original exercise to carry out individually and present and defend before a university tribunal, consisting of a project in the field of specific technology in telematics of telecommunication engineering of professional nature which synthesizes and integrates the skills acquired in the education program.



## **LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)**

Learning outcomes of the Bachelor Thesis (FR1) are:

1. The writing and developing of projects in the field of Telematics 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 Telematics Engineering**

The Bachelor Thesis is an individual work presented to a university committee, consisting of a professional project in the field of Telematics 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 Telematics 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**

The student must develop a work 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 Telematics 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 Year Project (TFG) is regulated by the Reglament de Treball Fi de Grau, approved by the Council of Government of the University of Valencia (<http://www.uv.es/=sgeneral/Reglamentacio/Doc/Estudis/C61.pdf>) and instructions developed by the Escola Tècnica Superior d'Enginyeria of the University of Valencia ETSE-UV (<http://www.uv.es/uvweb/engineering/en/undergraduate-degree-studies/degrees/-undergraduate-degree-final-project/-general-information-1285885225985.html>) (\* 1).



The Final Year Project should be defend in public session in a court composed of the tutor college student and two faculty members (assigned to degrees with teaching in the Department of Informatics UV) appointed by the Commission of the FYP 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 and will constitute qualifying committee and proceed to qualify the project following the schedule of the Commission of the FYP 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 addition to the quality of the different sections that are evaluated from the report, and given the importance of certain concepts, students must include the following sections in their report. Otherwise, the final grade will be reduced by the factors that appears next to each item.

State of the Art	0,5
Requirement definition F/NF	0,5
Time schedule and costs	0,5
Use Case Diagram*	0,5
Use Case Specification*	0,25
Class Diagram *	0,5
System Operation Interaction Diagrams*	0,5
Test studies	0,5
Budgetary assessment	0,25





(\*) Sections required only for software development projects

Moreover, students in mobility programs may make the FYP 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 FYP, assigning a UV academic tutor. In case that the student undertake an FYP defense in the target center and can demonstrate the competence of public presentation, the FYP 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. In any case, the evaluation of this subject will be done in compliance with the University Regulations in this regard, approved by the Governing Council on 30th May 2017 (ACGUV 108/2017)

The court unanimously will indicate whether a FYP (whit a qualification greater than or equal to 9), is can get the status of Distinction, in that case a brief report is required. The Commission of the FYP of the degree, based on these reports and the number of distinctions available, will decide which works will finally get the Distinction.

The assignment of Excellent with Distinction will follow the instructions developed by the ETSE on FYP (\* 1) .

## REFERENCES

### Basic

- Project Management Institute, "A Guide to the Project Management Body of Knowledge", 4th edition, Project Management Institute (2008), ISBN: 19-33890517
- Domingo Ajenjo, A. Dirección y Gestión de Proyectos, un enfoque práctico. Editorial Rama, (2005). ISBN: 9701511301.
- Martín, G; Dawson, C. El proyecto fin de carrera en ingeniería informática. Editorial Prentice Hall; ISBN: 84-20535605.

### Additional

- Pereña, J. "Dirección y Gestión de Proyectos". Editorial Díaz de Santos (1991). ISBN: 8479782498
- Grashina M.N; Newell M.W, Preguntas y Respuestas Sobre La Gestión de Proyectos, Editorial Gestión 2000, (2005). ISBN: 9788480886864
- Gómez, J. F; Coronel, A.J; Martinez de Irujo, L; Lorente, A. "Gestión de proyectos". FC Editorial. Madrid, (2000). ISBN: 84-28317747.