

Course guide

310637 - TFG-GEOI - Bachelor's Thesis

Last modified: 06/06/2024

Unit in charge:	Barcelona School of Building Construction		
Teaching unit:	Degree:	BACHELOR'S DEGREE IN GEOINFORMATION AND GEOMATICS ENGINEERING (Syllabus 2016). (Project subject).	
Academic year: 2024	ECTS Credits: 12.0	Languages: Catalan, Spanish, English	

LECTURER

Coordinating lecturer:	Rogelio López Bravo
Others:	Professorat que imparteix classe a la titulació.

PRIOR SKILLS

The Final Degree is a project in which the student must show the knowledge acquired in the different subjects that make up the master's degree. It is a synthesis work in which a specific topic will be addressed, well chosen by the student or a topic offered by any of the departmental sections.
The TFG is carried out when (almost) all the subjects of the degree have been passed

REQUIREMENTS

To take the TFG, the student has to choose a director of their work and then fill in a proposal signed by him and by its director. The TFG proposal is evaluated by a commission. At the moment it is accepted, the student is informed and at that time you can already enroll in the TFG. From this moment the student can develop his TFG.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

CE24EGG. Original Exercise to solve individually and present and defense in front of a university court, consisting in a project inside the scope of the specific technologies of the Geomatic and Topographic Engineering that summarise the acquired competences.

Generical:

CG1EGG. Design and develop geomatic and topographic projects.

CG4EGG. Capacity to take decisions, leadership, management of human resources and direction of interdisciplinary teams related with the special information.

CG8EGG. Planification, project, direction, execution and management of measurements processes, information systems, image exploitation, positioning and navigation; modeling, representation and visualization of the territorial information in, under and above the ground surface.

CG9EGG. Planification, project, direction, execution and management of processes and products with applications in the civil works and building construction, inside the geomatic scope.

CG10EGG. Planification, project, direction, execution and management of processes and products of application in the environment, agronomy, forest and miner engineering inside the geomatic field

CG11EGG. Planification, project, direction, execution and management of processes and products of application in the information society inside the geomatic field

CG12EGG. Planification, project, direction, execution and management of processes and products of application in the register, ordination of territory and valuation inside the geomatic field.

CG13EGG. Use of teams and instruments. Using of precision instruments, their characteristics, and also its use, transfer of data, treatment and interpretation of themselves.

Transversal:

CT1a. ENTREPRENEURSHIP AND INNOVATION: Being aware of and understanding how companies are organised and the principles that govern their activity, and being able to understand employment regulations and the relationships between planning, industrial and commercial strategies, quality and profit.

CT2. SUSTAINABILITY AND SOCIAL COMMITMENT: Being aware of and understanding the complexity of the economic and social phenomena typical of a welfare society, and being able to relate social welfare to globalisation and sustainability and to use technique, technology, economics and sustainability in a balanced and compatible manner.

CT3. TEAMWORK: Being able to work in an interdisciplinary team, whether as a member or as a leader, with the aim of contributing to projects pragmatically and responsibly and making commitments in view of the resources that are available.

CT5. FOREIGN LANGUAGE: Achieving a level of spoken and written proficiency in a foreign language, preferably English, that meets the needs of the profession and the labour market.

06 URI. EFFECTIVE USE OF INFORMATION RESOURCES. Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.

Basic:

CB2EGG. The students must know how to apply their knowledge to the work or vocation in a professional way and possess the competences that are used to be demonstrated by the elaboration and defense of arguments and the resolution of problems inside their own field of study.

CB3EGG. The students must have the capacity to gather and interpret relevant data (normally inside the field of study) to emit judgements that include a reflexion into relevant social, scientific or ethic contents.

CB4EGG. The students must know how to transmit information, ideas, problems and solutions to a specialized but also to a non-specialized public.

CB5EGG. The students have developed these knowledge abilities necessary to undertake later studies with a big grade of autonomy.

TEACHING METHODOLOGY

The TFG is a generally individual work on a subject related to Geomatics, directed by a professor of the Degree, in which the student has previously made a work proposal where the methodology to be followed and the objectives to be achieved is briefly described.

At the beginning of the work, the director and the student jointly prepare a work plan, and during its development they hold periodic meetings where the student shows the progress made and consults any doubts that may arise so that the director can advise them. The TFG ends with the writing of a report that will be defended in public exhibition before a court that will evaluate it.

LEARNING OBJECTIVES OF THE SUBJECT

The objectives of the TFG are:

- Make a technical document.
- Manage an engineering project using the usual tools.
- Analyze the technical and socio-economic viability of the project.
- Find useful information and use it autonomously.
- Solve problems derived from the scope of the project, independently or in collaboration with others.
- Develop a complex, complete project.

Put into practice the knowledge and skills acquired

Write rigorous, clear, accurate and traceable technical reports

Search and find by yourself the necessary information to carry out the parts of the project

- Effectively handle the legislation and regulations applicable to the area in which you carry out your project

Reasoning, formulating and defending before third parties based on proven results



CONTENTS

Field of geoinformation and geomatics in which the TFG is done

Description:

Depending on the area in geoinformation and geomatics and the specific topic of the TFG

Full-or-part-time: 300h

Guided activities: 30h

Self study : 270h

GRADING SYSTEM

The TFG will be defended before a tribunal formed by the teaching staff of the Degree. The duration of the exposure should be around 20 minutes.

Later, the court will ask the questions it considers.

Once the defense is finished, the court will meet with the director of the TFG and evaluate the work.

The court may propose the work for Honors if it considers it so and the grade is equal to or greater than 9.