

Construction Management (2500059)

General Information

School	ETSECCPB
Departments	Departament d'Enginyeria Civil i Ambiental (DECA)
Credits	4.5 ECTS
Programs	GRAU EN ENGINYERIA CIVIL (pla 2020) PARS: ENGINYER/A DE CAMINS, CANALS I PORTS (pla 2022)
Course	2025/26

Main teaching language at each group

- Group 10Q2 Catalan (Q2)

Faculty

Responsible Faculty: Jose Turmo Coderque

Faculty: Javier Pablo Ainchil Lavin, Eva Casacuberta Esplugas, Jose Turmo Coderque

Objectives of Education

Knowledge of tender types and strategies to prepare an estimation of a public work project and a planning of a construction. Project analysis and construction agents. Technical and economic planning. Risk prevention. Construction quality and environmental management. Management during execution. Main types of construction insurance. Insurable risks during construction. Claims. Type of reception of work and scope of the guarantees according to the type of construction.

1 Ability to apply construction procedures, construction machinery and construction planning techniques.

2 Ability to analyze the problems of health and safety, environmental management and risks during construction.

Introduction to the technical and economic planning of a real work: the analysis of the project and of the different agents participating in the construction. Knowledge of the different types of bidding and strategies to prepare an offer and planning a construction work. Knowledge of the management of health and safety on a construction site. Elaboration of a quality plan and work instructions and know the fundamentals of the environmental management of the work. Knowledge of the main tools available to the Site Manager for proper technical and economic management of the work. Knowledge about insurances, the different figures and the main types of insurance in construction. Learn how to manage claims. Knowledge of the types of reception that can be given in a work and the scope of the guarantees according to the type of construction. Knowledge of the management of a BIM software.

Competencies

Especific

Ability to analyze the problem of safety and health in construction sites. (Common module to the Civil branch)

Ability to apply construction procedures, construction machinery and construction planning techniques. (Specific technology module: Civil Construction)

Capacity for the construction of geotechnical works. (Specific technology module: Civil Construction)

Generic

Scientific-technical training for the exercise of the profession of Technical Engineer of Public Works and knowledge of the functions of advice, analysis, design, calculation, project, construction, maintenance, conservation and exploitation.

Ability to project, inspect and direct works, in their field.

Capacity for maintenance, conservation and exploitation of infrastructure, in its field.

Knowledge of the history of civil engineering and training to analyze and assess public works in particular and construction in general.

Identify, formulate and solve engineering problems. Pose and solve construction engineering problems with initiative, decision-making skills and creativity. Develop a systematic and creative method of analysis and problem solving. (Additional school competition).

Conceive, project, manage and maintain systems in the field of construction engineering. Cover the entire life cycle of an infrastructure or system or service in the field of construction engineering. (Additional school competition).

Total hours of student work

		Hours	Percentage
Supervised Learning	Large group	45.0 h	100.00 %
	Medium group	0.0 h	0.00 %
	Laboratory classes	0.0 h	0.00 %
	Guided Activities	0.0 h	0.00 %
Self Study		67.5 h	

Contents

Contract management

Contract management.
Practical work

Construction management

Construction management
Practical work

Activities

Virtual site visit

Dedication

4h 30m

Teaching Methodology

The subject consists of 3 hours a week of face-to-face classes in a classroom. Theoretical classes are taught in which the teacher exposes the basic concepts and materials of the subject and presents examples. It is proposed to carry out practical exercises in order to consolidate the general and specific learning objectives. Support material is used in the form of a detailed teaching plan through the ATENEA virtual campus: content, programming of evaluation and directed learning activities, and bibliography.

Workshops and interventions by speakers other than the teachers of the subject are planned for the course. These may be developed in Spanish or Catalan and exceptionally in English. Support material is used through the virtual campus: content, and bibliography. The material can be in Spanish, Catalan and English. Questions from students to teachers can be answered in Spanish, Catalan or English. The practical work and the exams carried out by the students can be done in Spanish, Catalan or English.

Although most of the sessions will be given in the language indicated, sessions supported by other occasional guest experts may be held in other languages.

Grading Rules

() The evaluation calendar and grading rules will be approved before the start of the course.*

Qualification formula

Exam: NE Final Exam mark

Works: NT Works mark

Final course grade (NFA)

$NFA=0.5*NE+0.5*NT$

Test Rules

The grade for the subject is obtained from the continuous assessment grades. Continuous assessment consists of doing different activities, both individual and group, of an additive and formative nature, carried out during the course (inside the classroom and outside of it). The evaluation tests consist of a part with questions about concepts associated with the learning objectives of the subject in terms of knowledge or understanding, and a set of application exercises. Carrying out the practical work is an essential condition to pass the subject. Criteria for qualification and admission to re-evaluation: students suspended in the ordinary evaluation who have regularly taken the evaluation tests of the failed subject will have the option to take a re-evaluation test in the period established in the academic calendar. The students who have already passed it or the students qualified as not presented will not be able to present themselves to the re-evaluation test of a subject. The grade in the case of taking the reevaluation will be $0.5*NE+0.5*NT$. The maximum grade in the case of taking the reevaluation exam will be five (5.0). The non-attendance of a student summoned to the re-evaluation test, held within the established period, may not give rise to another test with a later date. Extraordinary evaluations will be carried out for those students who, due to proven force majeure, have not been able to carry out any of continuous assessment tests. These tests must be authorized by the corresponding head of studies, at the request of the professor responsible for the subject, and will be carried out within the corresponding academic period.

Office Hours

At request

Bibliography

Basic

- Peurifoy, R.L ... [et al.]. [Construction planning, equipment, and methods](#). 10th ed. McGraw Hill, 2024. ISBN 1-264-27873-X.
- Rayner, P.; Reiss, G.; MacNicol, D. [Portfolio and programme management demystified: managing multiple projects successfully](#). Second edition. London ; New York: Routledge. Taylor & Francis Group, [2013]. ISBN 9780415558341.