

Course guides

2500048 - GECGPROJOB - Construction Management

Last modified: 01/10/2021

Unit in charge: Barcelona School of Civil Engineering
Teaching unit: 751 - DECA - Department of Civil and Environmental Engineering.

Degree: BACHELOR'S DEGREE IN CIVIL ENGINEERING (Syllabus 2020). (Optional subject).

Academic year: 2021 **ECTS Credits:** 4.5 **Languages:** Catalan, Spanish, English

LECTURER

Coordinating lecturer: JOSE TURMO CODERQUE

Others: JAVIER PABLO AINCHIL LAVIN, SEYEDMILAD KOMARIZADEHASL, GONZALO RAMOS SCHNEIDER, JOSE TURMO CODERQUE

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

- 14406. Ability to analyze the problem of safety and health in construction sites. (Common module to the Civil branch)
- 14415. Ability to apply construction procedures, construction machinery and construction planning techniques. (Specific technology module: Civil Construction)
- 14416. Capacity for the construction of geotechnical works. (Specific technology module: Civil Construction)

Generical:

- 14380. 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.
- 14383. Ability to project, inspect and direct works, in their field.
- 14386. Capacity for maintenance, conservation and exploitation of infrastructure, in its field.
- 14389. Knowledge of the history of civil engineering and training to analyze and assess public works in particular and construction in general.
- 14390. 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).
- 14391. 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).

TEACHING METHODOLOGY

The course consists of 1.5 hours per week of classroom activity (large size group) and 1.5 hours weekly with half the students (medium size group).

The 1.5 hours in the large size groups are devoted to theoretical lectures, in which the teacher presents the basic concepts and topics of the subject, shows examples and solves exercises.

The 1.5 hours in the medium size groups is devoted to solving practical problems with greater interaction with the students. The objective of these practical exercises is to consolidate the general and specific learning objectives.

Support material in the form of a detailed teaching plan is provided using the virtual campus ATENEA: content, program of learning and assessment activities conducted and literature.

LEARNING OBJECTIVES OF THE SUBJECT

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.

STUDY LOAD

Type	Hours	Percentage
Hours medium group	22,5	20.00
Hours large group	22,5	20.00
Guided activities	4,5	4.00
Self study	63,0	56.00

Total learning time: 112.5 h

CONTENTS

Contract management

Description:

Contract management.
Practical work

Full-or-part-time: 54h

Theory classes: 12h 30m

Practical classes: 10h

Self study : 31h 30m



Construction management

Description:

Construction management
Practical work

Full-or-part-time: 54h

Theory classes: 10h
Practical classes: 12h 30m
Self study : 31h 30m

GRADING SYSTEM

The mark of the course is obtained from the ratings of continuous assessment and their corresponding laboratories and/or classroom computers.

Continuous assessment consist in several activities, both individually and in group, of additive and training characteristics, carried out during the year (both in and out of the classroom).

The teachings of the laboratory grade is the average in such activities.

The evaluation tests consist of a part with questions about concepts associated with the learning objectives of the course with regard to knowledge or understanding, and a part with a set of application exercises.

EXAMINATION RULES.

The completion of practical assignment is an essential condition to pass the course.

BIBLIOGRAPHY

Basic:

- Peurifoy ... [et al.]. Construction planning, equipment, and methods. 8th. New York: McGraw Hill, 2011. ISBN 0071289518.
- Rayner, Paul; Reiss, Geoff; MacNicol, Donnie. Portfolio and programme management demystified : managing multiple projects successfully. Second edition. London ; New York: Routledge. Taylor & Francis Group, [2013]. ISBN 9780415558341.