Course guides  
2500024 - GECGESCONS - Construction Management

**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). (Compulsory subject).

**Academic year:** 2021  
**ECTS Credits:** 6.0  
**Languages:** Catalan, Spanish, English

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**LECTURER**

Coordinating lecturer: JOSE TURMO CODERQUE  
Others: JOSE TURMO CODERQUE, MANUEL VALDES LOPEZ

**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)
14409. Knowledge of construction procedures, construction machinery and techniques of organization, measurement and evaluation of works. (Common module to the Civil branch)
14415. Ability to apply construction procedures, construction machinery and construction planning techniques. (Specific technology module: Civil Construction)

**General:**
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.
14381. Understanding of the multiple technical and legal conditions that arise in the construction of a public work, and ability to use proven methods and accredited technologies, in order to achieve the highest efficiency in construction while respecting the environment and the protection of the health and safety of workers and users of public works.
14382. Knowledge, understanding and ability to apply the necessary legislation during the exercise of the profession of Technical Engineer of Public Works.
14383. Ability to project, inspect and direct works, in their field.
14388. Knowledge and ability to apply business management techniques and labor legislation.
14389. Knowledge of the history of civil engineering and training to analyze and assess public works in particular and construction in general.
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 2 hours per week of classroom activity (large size group) and 2 hours weekly with half the students (medium size group).

The 2 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 2 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


1 Ability to conduct a study of alternatives.
2 Ability to perform a formal design of an infrastructure in Civil Engineering.
3 Ability to perform a comprehensive management analysis of a project.


STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study</td>
<td>84,0</td>
<td>56.00</td>
</tr>
<tr>
<td>Hours medium group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Guided activities</td>
<td>6,0</td>
<td>4.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
</tbody>
</table>

Total learning time: 150 h

CONTENTS

The project and the work site

Description:
Legislation applicable to public works
Safety and health, Quality and Environment in the work
Resolution of practical cases
Analysis of a real construction project

Specific objectives:
Knowledge of the legislation applicable to works
Knowledge of the application of Health and Safety, Quality and Environment in the work
Application of the concepts of legislation to the resolution of practical cases
Apply the knowledge acquired in the subject

Full-or-part-time: 86h 24m
Theory classes: 12h
Practical classes: 24h
Self study: 50h 24m
Planning

**Description:**
- Technical planning
- Economic planning

**Specific objectives:**
- Know how to plan a work technically
- Financially plan a work

**Full-or-part-time:** 14h 23m
- Practical classes: 6h
- Self study : 8h 23m

Construction

**Description:**
- Construction of linear works
- Construction of urban works

**Specific objectives:**
- Know the construction methods and machinery of linear works
- Understand the methods, constraints and machinery to build urban works

**Full-or-part-time:** 43h 12m
- Theory classes: 18h
- Self study : 25h 12m

**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.

**BIBLIOGRAPHY**

**Basic:**