Course guides

250715 - 250715 - Economical and Financial Aspects of Construction

Unit in charge: Barcelona School of Civil Engineering
Teaching unit: 758 - EPC - Department of Project and Construction Engineering.
Degree: MASTER'S DEGREE IN STRUCTURAL AND CONSTRUCTION ENGINEERING (Syllabus 2015). (Optional subject).
Academic year: 2020  ECTS Credits: 5.0  Languages: Spanish

LECTURER

Coordinating lecturer: XAVIER ROCA RAMON
Others: PEDRO JUDEZ MUÑOZ, XAVIER ROCA RAMON

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
13367. To apply innovative and sustainable technological aspects in the management and implementation of projects and works.
13370. To analyze the multiple technical and legal conditions arising in the construction of public works, and use proven methods and proven technologies with the aim of achieving greater efficiency in construction while respecting the environment and protecting the safety and health of workers and users of public works.

Generical:
13360. To conceive, design, analyze and manage structures or structural elements of civil engineering or building, encouraging innovation and the advance of knowledge.
13361. To develop, improve and use conventional materials and new construction techniques to ensure the safety requirements, functionality, durability and sustainability.
13362. To define construction processes and methods of organization and management of projects and works.
13363. To design plans for safety, quality and environmental and socioeconomic impacts related to the construction process.

TEACHING METHODOLOGY

The course consists of 3 hours per week of classroom activity, mixing theoretical lectures and solving practical problems with greater interaction with the students.

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

Subject to provide the skills needed to develop cost management and financial analysis of a construction project

- Capability to develop cost management and financial analysis of a construction project, including all stages, from conception to execution. - Capability to consider economic aspects as a criterion for decision making, both in the design phase and in the work construction. - Knowledge of different types of costs on a construction project, the need for economic planning and cost control during its evolution.


STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory classes</td>
<td>19,5</td>
<td>15.59</td>
</tr>
<tr>
<td>Practical classes</td>
<td>9,8</td>
<td>7.83</td>
</tr>
<tr>
<td>Guided activities</td>
<td>6,0</td>
<td>4.80</td>
</tr>
<tr>
<td>Self study</td>
<td>80,0</td>
<td>63.95</td>
</tr>
<tr>
<td>Laboratory classes</td>
<td>9,8</td>
<td>7.83</td>
</tr>
</tbody>
</table>

Total learning time: 125.1 h

CONTENTS

Introduction + Design Phase

Description:
Introduction + Design Phase

Full-or-part-time: 9h 36m
Theory classes: 4h
Self study : 5h 36m

Budgets

Description:
Budgets

Full-or-part-time: 9h 36m
Theory classes: 4h
Self study : 5h 36m
### Viabilidad + Licitación

**Description:** Viability

**Full-or-part-time:** 9h 36m  
Theory classes: 4h  
Self study : 5h 36m

### Estimated economic

**Description:** Economical Estimation

**Full-or-part-time:** 12h  
Laboratory classes: 5h  
Self study : 7h

### Cost centers

**Description:** Cost Centres

**Full-or-part-time:** 12h  
Laboratory classes: 5h  
Self study : 7h

### Economics and Management

**Description:** Economics and Management

**Full-or-part-time:** 9h 36m  
Theory classes: 4h  
Self study : 5h 36m

### Control works

**Description:** Control works

**Full-or-part-time:** 12h  
Practical classes: 5h  
Self study : 7h
Financing Systems

Description:
Financing Systems

Full-or-part-time: 7h 11m
Theory classes: 3h
Self study: 4h 11m

Evaluation

Full-or-part-time: 12h
Laboratory classes: 5h
Self study: 7h

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.

Failure to perform a laboratory or continuous assessment activity in the scheduled period will result in a mark of zero in that activity.

BIBLIOGRAPHY

Basic:
- Roca, Xavier. Apuntes propios de la asignatura.