250714 - Structural Technology Seminars

Coordinating unit: 250 - ETSECCPB - Barcelona School of Civil Engineering
Teaching unit: 751 - DECA - Department of Civil and Environmental Engineering
Academic year: 2019
Degree: MASTER'S DEGREE IN STRUCTURAL AND CONSTRUCTION ENGINEERING (Syllabus 2015). (Teaching unit Optional)
ECTS credits: 2,5 Teaching languages: Catalan, Spanish, English

Teaching staff
Coordinator: CLIMENT MOLINS BORRELL
Others: ANGEL CARLOS APARICIO BENGOECHEA, JESÚS MIGUEL BAIRÁN GARCÍA, IGNACIO CASANOVA HORMAECHEA, ANTONIO RICARDO MARI BERNAT, CLIMENT MOLINS BORRELL, EVA OLLER IBARS, ESTHER REAL SALADRIGAS

Degree competences to which the subject contributes

Specific:
13364. To conceive and design civil and building structures that are safe, durable, functional and integrated into its surroundings.
13365. Designing and building using traditional materials (reinforced concrete, prestressed concrete, structural steel, masonry, wood) and new materials (composites, stainless steel, aluminum, shape memory alloys?).
13366. To evaluate, maintain, repair and strengthen existing structures, including the historic and artistic heritage.
13369. To apply methods and advanced design software and structural calculations, based on knowledge and understanding of forces and their application to the structural types of civil engineering.

General:
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.

Teaching methodology
The course consists of 2 hours per week of classroom activity (large size group) during 10 weeks.
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.
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 acquire knowledge about recent trends in research of structural technology
Capability to learn about the recent advances in research structural technology in civil engineering and building
Recent research progress on structural technology
### Study load

<table>
<thead>
<tr>
<th>Category</th>
<th>Time</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory classes:</td>
<td>10h 49.8m</td>
<td>17.33%</td>
</tr>
<tr>
<td>Practical classes:</td>
<td>5h 25.8m</td>
<td>8.69%</td>
</tr>
<tr>
<td>Laboratory classes:</td>
<td>5h 25.8m</td>
<td>8.69%</td>
</tr>
<tr>
<td>Guided activities:</td>
<td>0h 49.2m</td>
<td>1.31%</td>
</tr>
<tr>
<td>Self study:</td>
<td>40h</td>
<td>63.99%</td>
</tr>
</tbody>
</table>
**Total learning time:** 62h
250714 - Structural Technology Seminars

<table>
<thead>
<tr>
<th>30,6m</th>
<th></th>
</tr>
</thead>
</table>

### Content

<table>
<thead>
<tr>
<th>Seminars Structural Technology</th>
<th>Learning time: 51h 36m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 20h 30m</td>
</tr>
<tr>
<td></td>
<td>Laboratory classes: 1h</td>
</tr>
<tr>
<td></td>
<td>Self study : 30h 06m</td>
</tr>
</tbody>
</table>

**Description:**

Seminars of Structural Technology

### Qualification system

The mark of the course takes into account the attendance to the seminars and the development of an individual assignment on the field of one of the sessions.

### Regulations for carrying out activities

The assignment has to be developed individually.

### Bibliography

**Basic:**

- ISBN -.