310418 - Intervention Techniques in Existing Buildings. Functional Renovations

**Coordinating unit:** 310 - EPSEB - Barcelona School of Building Construction

**Teaching unit:** 753 - TA - Department of Architectural Technology

**Academic year:** 2018

**Degree:** MASTER'S DEGREE IN ADVANCED BUILDING CONSTRUCTION (Syllabus 2014). (Teaching unit Optional)

**ECTS credits:** 5  

**Teaching languages:** Spanish

### Teaching staff

**Coordinator:** Casanovas Boixereu, Francesc X.

**Others:** Olona Casas, Joan

### Opening hours

**Timetable:** To agree.

### Teaching methodology

Theoretical and practical classes, with visits to buildings in rehabilitation process or rehabilitated to lay out exercises which allow to go in depth in the subject contents.

### Learning objectives of the subject

At the end of the subject the student must be able to:

- To have a wide knowledge about the intervention techniques in existing buildings, oriented to all their components and types of damages.
- Apply specific techniques for the correction of damages and improvement of the existing buildings.
- Write a rehabilitation project.

### Study load

<table>
<thead>
<tr>
<th>Total learning time: 125h</th>
<th>Hours large group: 15h</th>
<th>12.00%</th>
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<tbody>
<tr>
<td></td>
<td>Hours medium group: 5h</td>
<td>4.00%</td>
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<tr>
<td></td>
<td>Hours small group: 5h</td>
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<td></td>
<td>Guided activities: 10h</td>
<td>8.00%</td>
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<td>Self study: 90h</td>
<td>72.00%</td>
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**Content**

<table>
<thead>
<tr>
<th>title english</th>
<th>Learning time: 0h</th>
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<tr>
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<td>Theory classes: 0h</td>
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**Description:**
The subject provides to the students a detailed knowledge in the main intervention techniques in repairation, improvement of outputs and substitution of the construction components and systems of the existing buildings, to adapt the building to the current regulations and outputs. The subject will also face the students towards the complexity of considering the functional programme, the heritage values and the state of preservation of the building and the technical and economic possibilities. The students will further in these aspects:

1. Intervention in structural elements and foundations. Design and calculation.
   a. Types of intervention and design criteria.
   b. Intervention in slabs and beams.
   c. Intervention in pillars and load bearing walls.
   d. Intervention in archs, vaults and domes.
   e. Intervention in foundations.
3. Improvement of thermal and stagnant coverings.
4. Intervention in finishes.
5. Writing of rehabilitation projects.

**Specific objectives:**
At the end of the subject the students must be able to:

- To have a wide knowledge about the intervention techniques in existing buildings, oriented to all their components and types of damages.
- Apply specific techniques for the correction of damages and improvement of the existing buildings.
- Write a rehabilitation project.

**Qualification system**

50% final exam and 50% exercises done during the course.

**Bibliography**

**Basic:**


