## 250968 - TFM - Master's Thesis

### 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 NUMERICAL METHODS IN ENGINEERING (Syllabus 2012). (Teaching unit Project)

### ECTS credits:
30

### Teaching languages:
Catalan, Spanish, English

#### Teaching staff

- **Coordinator:** RICCARDO ROSSI
- **Others:** RICCARDO ROSSI

#### Teaching methodology

The course consists of 0 hours per week of classroom activity (large size group).

The 0 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

In the Master's final project, or thesis, the students will apply their knowledge on numerical methods to solve a concrete problem in engineering, or for the development of a research project. It will value very positively that the subject of the thesis is proposed by a company and that it contributes to solve a problem of practical interest and that it is done in collaboration with another national or international institution. For on campus and mixed versions, the evaluation of the final project will be in front of a dissertation committee and its public exhibition will last no less than 30 minutes. The court will be composed by three doctorates. The responsible authority of the Master will fix a single tribunal for all the defenses that take place during a single Academic Course. In the case of the correspondence course version, it contemplates a face-to-face presentation of the work or, a presentation through means of teleconferencing with the same tribunal that in the previous case.

#### Study load

<table>
<thead>
<tr>
<th>Total learning time: 375h</th>
<th>Guided activities: 90h</th>
<th>24.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study:</td>
<td>285h</td>
<td>76.00%</td>
</tr>
</tbody>
</table>
The evaluation of the subject will be obtained on the basis of the public presentation. The written work, presented according to the norms and within the prescribed deadlines, will be provided to the jury. The jury will take into account both the formal aspects of the writing and the oral presentation of the TFM as well as the defense of the work to the questions of the jury. The final marks will be assigned by the commission either by consense or by arithmetic averaging (and rounding) of the marks proposed by the different members of the jury.

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.

**Qualification system**

The evaluation of the subject will be obtained on the basis of the public presentation. The written work, presented according to the norms and within the prescribed deadlines, will be provided to the jury. The jury will take into account both the formal aspects of the writing and the oral presentation of the TFM as well as the defense of the work to the questions of the jury. The final marks will be assigned by the commission either by consense or by arithmetic averaging (and rounding) of the marks proposed by the different members of the jury.

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.

**Regulations for carrying out activities**

presentation max 20 min
discussion 10 min

**Bibliography**

**Basic:**