Course guide
250702 - 250702 - Workshops and Research Seminars

Last modified: 21/06/2024

Unit in charge:	Barcelona School of Civil Engineering
Teaching unit:	751 - DECA - Department of Civil and Environmental Engineering.

Degree: MASTER'S DEGREE IN STRUCTURAL AND CONSTRUCTION ENGINEERING (Syllabus 2015). (Compulsory subject).

Academic year: 2024   **ECTS Credits:** 5.5   **Languages:** Spanish, English

LECTURER

Coordinating lecturer: EVA MARIA OLLER IBARS

Others: JESÚS MIGUEL BAIRÁN GARCÍA, ROLANDO ANTONIO CHACÓN FLORES, NOEMÍ DUARTE GÓMEZ, JUAN MURCIA DELSO, EVA MARIA OLLER IBARS, NIKOLA TOSIC

TEACHING METHODOLOGY

The course consists of 3 hours per week of classroom activity (large size group).

The course consists of conducting group workshops on different topics that are included in the contents and sessions of this guide, which are transversal to other subjects of the Master.

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.

In the case of the group in English, some workshops where an external expert is invited will be held in Spanish if the guest expresses himself better in that language.

Although most of the sessions will be given in the language indicated, sessions supported by other occasional guest experts may be held in other languages.

LEARNING OBJECTIVES OF THE SUBJECT

Subject to know the latest trends in research related to structural engineering and construction and other cross-cutting issues

- Latest trends in research related to structural engineering and construction.
- Sofware related to structural analysis and management of structures .
- Aspects related to the development of the master thesis: scientific method, writing scientific and technical documents, using database to search scientific articles for the development of state of the art.
- Workshops on the structural engineering design.

STUDY LOAD

Type	Hours	Percentage
Self study	88,0	64.00
Hours large group	28,1	20.44
Hours small group	10,7	7.78
Hours medium group	10,7	7.78

Total learning time: 137.5 h

CONTENTS

Computer programs

Description:
Matlab
SAP2000
SAP2000. Case study
MIDAS Civil
MIDAS Civil. Case study
BIM Software
BIM software. Case study
Software IdeaStatica and Diamonds
Software Idea Statica and Diamonds. Case study

Full-or-part-time: 67h 12m
Theory classes: 13h
Practical classes: 14h
Laboratory classes: 1h
Self study : 39h 12m

Workshops

Description:
Conceptual design workshop
Workshop project conception

Full-or-part-time: 12h
Theory classes: 3h
Practical classes: 2h
Self study : 7h

Subjects related with the master thesis

Description:
Gathering information and bibliography
References
How to write scientific and technical documents
Making presentations
Budget of a project
Budget of a project. Case study

Full-or-part-time: 31h 12m
Theory classes: 10h
Laboratory classes: 3h
Self study : 18h 12m

Research Seminars

Description:
Research seminars

Full-or-part-time: 8h 24m
Theory classes: 3h 30m
Self study : 4h 54m

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.

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:
- Área de Informática del ITeC. Departamento de Soporte Técnico y Formación. TCQ2000 ITeC : guía de iniciación [on line]. Barcelona: Institut de Tecnologia de la Construcció de Catalunya, ITeC, 2015 [Consultation: 04/05/2021]. Available on: http://files.itec.cat/tcq43/docs/cas/iniciacion.pdf. ISBN 9788478536450.
- Midas. Midas User Manual [on line]. 2006 [Consultation: 11/05/2021]. Available on: https://pdssbn.astro.umd.edu/holdings/ro-d-midas-3-prl-samples-v1.0/document/mid_user.pdf.
- CSI Computers and structures. Manual de Sap 2000.