

Course guide

250714 - 250714 - Structural Technology Seminars

Last modified: 22/05/2025

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). (Optional subject).	
Academic year: 2025	ECTS Credits: 2.5	Languages: English

LECTURER

Coordinating lecturer:	CLIMENT MOLINS BORRELL
Others:	DANIEL ALARCÓN FERNÁNDEZ, ITSASO ARRAYAGO LUQUIN, JESÚS MIGUEL BAIRÁN GARCÍA, ROLANDO ANTONIO CHACÓN FLORES, ANTONIO RICARDO MARI BERNAT, CLIMENT MOLINS BORRELL, JUAN MURCIA DELSO, EVA MARIA OLLER IBARS

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.

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.

TEACHING METHODOLOGY

The course consists of 1:40 hours per week of classroom activity (large size group) during 12 weeks.

The 1:40 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.

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 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

Type	Hours	Percentage
Hours large group	22,5	36.00
Self study	40,0	64.00

Total learning time: 62.5 h

CONTENTS

Seminars Structural Technology

Description:

Seminars of Structural Technology

Full-or-part-time: 54h

Theory classes: 22h 30m

Self study : 31h 30m

GRADING 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.

EXAMINATION RULES.

The assignment has to be developed individually.

BIBLIOGRAPHY

Basic:

- -, -, -, -: -, -. ISBN -.