

SUBJECT TEACHING GUIDE

M1458 - Project of Pretensed Concrete Structures

Master's Degree in Civil Engineering

Academic year 2019-2020

1. IDENTIFYING DATA					
Degree	Master's Degree in Civil Engineering			Type and Year	Compulsory. Year 2
Faculty	School of civil Engineering				
Discipline	Project of Pretensed Concrete Structures				
Course unit title and code	M1458 - Project of Pretensed Concrete Structures				
Number of ECTS credits allocated	3	Term	Semester based (1)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA ESTRUCTURAL Y MECANICA				
Name of lecturer	CARLOS ALONSO COBO				
E-mail	carlos.alonso@unican.es				
Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 2. DESPACHO (2070)				
Other lecturers	JAVIER TORRES RUIZ ALVARO GAUTE ALONSO				

3.1 LEARNING OUTCOMES

- Obtain the knowledge necessary to analyze the behavior of prestressed structures

4. OBJECTIVES

Introduction to prestressed concrete
Creep and shrinkage of concrete and relaxation of steel.
Predimensioning
Linear and no linear analysis
Reinforcement of special areas.

6. COURSE ORGANIZATION

CONTENTS	
1	Introduction to prestressed concrete
2	Calculation for SLS.
3	Calculation for ULS.
4	Shear and torsion
5	Non-linear analysis
6	Reinforcement of special areas.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Description Typology final evaluation recovery Work work no yes	Work	No	Yes	20,00
EXAM WRITTEN EXAM YES MINIMUM SCORE DURATION 4 HOURS PERFORMANCE DATE: ACCORDING TO EXAMS' SCHEDULE RECOVERY CONDITIONS: SEPTEMBER	Written exam	Yes	Yes	40,00
Work Theory Exam Exercise Exam	Written exam	Yes	Yes	40,00
TOTAL				100,00
Observations				
<p>The students will have to carry out the practical and laboratory exercises proposed in class and a job, all of which must be done during the course.</p> <p>At the end of the course there will be a written examination with theoretical questions and a practical exercise.</p> <p>The written examination consists of two parts: a theoretical that represents 40% of the final note, where a minimum note of 3 is to be obtained, and a practical exercise representing the other 40%.</p>				
Observations for part-time students				
Students enrolled in part-time, who do not attend class, must obtain 100% of the note in the written year.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Instrucción de hormigón estructural EHE-08
Eurocódigo EC-2. Proyecto de estructuras de Hormigón
Código Modelo 2.010

