

School of civil Engineering

SUBJECT TEACHING GUIDE

G1965 - CONSTRUCTION MATERIALS

Degree in Civil Engineering

Academic year 2023-2024

1. IDENTIFYING DATA									
Degree	Degree in Civil Engineering			Type and Year	Compulsory. Year 2				
Faculty	School of civil Engineering								
Discipline	CONSTRUCTION MATERIALS								
Course unit title and code	G1965 - CONSTRUCTION MATERIALS								
Number of ECTS credits allocated	6	Term Semest		r based (1)					
Web									
Language of instruction	Spanish	English Friendly	Yes	Mode of o	delivery	Face-to-face			

Department	DPTO. CIENCIA E INGENIERIA DEL TERRENO Y DE LOS MATERIALES
Name of lecturer	SERGIO CICERO GONZALEZ
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Other lecturers	ANA ISABEL CIMENTADA HERNANDEZ CARLOS THOMAS GARCIA ISRAEL ENRIQUE SOSA YEPEZ



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3.1 LEARNING OUTCOMES

- Knowledge about the experimental tests that allow the mechanical properties of constuction materials to be determined

- To gain the basic knowledge related to the mechanical behaviour of materials, which allows following the courses of subsequent semesters

- To dominate the technical vocabulary related to construction materials

- To know the different types of structural steels and the different strategies that may be used to modify their mechanical properties

- To know the different fabrication and placement processes of construction materials, specially the design, fabrication and pouring of concrete

4. OBJECTIVES

Determine the relation between (micro)structure and mechanical behaviour of materials

To identify the main construction materials

To define and analyse the physical and mechanical properties of construction materials

To know and compare the properties of the different construction materials

6. COURSE ORGANIZATION				
CONTENTS				
1	Lesson 1. Introduction: general properties of materials			
2	Lesson 2. Physical properties of materials			
3	Lesson 3. Mechanical properties of materials			
4	Lesson 4. Metals			
5	Lesson 5. Binders, mortars and concretes			
6	Lesson 6. Polymers, ceramics and composites			
7	Lesson 7. Other construction materials			
8	Lesson 8. Materials selecion			



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7. ASSESSMENT METHODS AND CRITERIA							
Description	Туре	Final Eval.	Reassessn	%			
Mid-term exam	Written exam	No	Yes	35,00			
Final exam	Written exam	Yes	Yes	35,00			
Continuous evaluation	Others	No	No	20,00			
Course work	Work	No	No	10,00			
TOTAL 100,0							
Observations							
Lab practices are mandatory							
Observations for part-time students							
The final grade of part-time students will be determined by considering the results of both the mid-term and the final exam, not considering the continuous evaluation.							

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

- Materiales para ingeniería civil. M.S. Mamlouk, J.P. Zaniewski. ISBN: 978-84-8322-510-3

- Hormigón. M. Fernández Cánovas. ISBN: 978-84-3800-364-0

- EHE-08. ISBN: 978-84-498-0825-8

- Materiales para la ingeniería 2: Introducción a la microestructura, el procesiamiento y el diseño. M.F. Ashby, D.R.H. Jones.

ISBN: 978-84-291-7256-0.