

GUÍA DOCENTE ABREVIADA DE LA ASIGNATURA

G2011 - Construction Materials

Grado en Ingeniería Civil Programa Cornell

Curso Académico 2022-2023

1. DATOS IDENTIFICATIVOS				
Título/s	Grado en Ingeniería Civil Programa Cornell		Tipología v Curso	Obligatoria. Curso 2 Obligatoria. Curso 2
Centro	Escuela Técnica Superior de Ingenieros de Caminos, Canales y Puertos			
Módulo / materia	COMÚN A LA RAMA CIVIL MATERIALES DE CONSTRUCCIÓN			
Código y denominación	G2011 - Construction Materials			
Créditos ECTS	6	Cuatrimestre	Cuatrimestral (1)	
Web				
Idioma de impartición	Inglés	Forma de impartición	Presencial	

Departamento	DPTO. CIENCIA E INGENIERIA DEL TERRENO Y DE LOS MATERIALES		
Profesor responsable	CARLOS THOMAS GARCIA		
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Número despacho	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 0. DESPACHO (0005)		
Otros profesores	DIEGO FERREÑO BLANCO SERGIO CICERO GONZALEZ		

3.1 RESULTADOS DE APRENDIZAJE

- Knowledge of the experimental techniques that allow the determination of the properties of construction materials
- Acquire the basic knowledge related to the mechanical properties necessary to follow the subjects of successive courses
- Technical terminology associated with construction materials
- Know the types of structural steels and the existing strategies to modify their mechanical properties
- Know the different manufacturing and installation processes of construction materials and , in particular, the methods of design, production and placement of concrete

4. OBJETIVOS

Learn about the relationship between the structure and behavior of materials
Identify the main construction materials
Define and analyze the physical-mechanical properties of construction materials
Know and compare the properties of construction materials

6. ORGANIZACIÓN DOCENTE

CONTENIDOS

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. Metallic materials
5	Lesson 5. Binders, mortars and concretes
6	Lesson 6. Polymers, ceramics and composites
7	Lesson 7. Other construction materials
8	Lesson 8. Selection of materials

7. MÉTODOS DE LA EVALUACIÓN

Descripción	Tipología	Eval. Final	Recuper.	%
MIDTERM EXAM	Examen escrito	No	Sí	35,00
FINAL EXAM	Examen escrito	Sí	Sí	35,00
Continuous Evaluation	Otros	No	No	20,00
Individual work	Trabajo	No	No	10,00
TOTAL				100,00

Observaciones

Laboratory practices are mandatory to pass the subject.

Crterios de evaluación para estudiantes a tiempo parcial

The qualification of part-time students will be determined based on the results of the written exams proposed in the evaluation methods, without taking into account the 20% that is assigned to Continuous Evaluation.

In any case, attendance at laboratory practices or the presentation of a work related to their contents, is mandatory to pass the course.

8. BIBLIOGRAFÍA Y MATERIALES DIDÁCTICOS

BÁSICA

Materials Science and Engineering: An Introduction, 6th Edition. William D. Callister. Publisher: John Wiley and Sons
Materials Selection in Mechanical Design, 2nd Edition. Michael F. Ashby. Butterworth-Heineman
Fracture Mechanics: Fundamentals and Applications; T.L. Anderson (2005)
Spanish Structural Code
Civil Engineering Materials 1st Edition - September 3, 2015, Peter Claisse, eBook ISBN: 9780128027516, Paperback ISBN: 9780081002759

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