

## GUÍA DOCENTE ABREVIADA DE LA ASIGNATURA

### G2011 - Construction Materials

Grado en Ingeniería Civil

Grado en Ingeniería Civil

Programa Cornell

Curso Académico 2024-2025

1. DATOS IDENTIFICATIVOS			
Título/s	Grado en Ingeniería Civil Grado en Ingeniería Civil Programa Cornell		Tipología y 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 (2)
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	JOSE ANTONIO CASADO DEL PRADO DIEGO FERREÑO BLANCO ANA ISABEL CIMENTADA HERNANDEZ

### 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
Laboratory Test	Evaluación en laboratorio	No	No	10,00
<b>TOTAL</b>				<b>100,00</b>

#### Observaciones

Laboratory practices are mandatory to pass the subject.

#### Criterios 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-Heinemann  
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

Esta es la Guía Docente abreviada de la asignatura. Tienes también publicada en la Web la información más detallada de la asignatura en la Guía Docente Completa.