

SUBJECT TEACHING GUIDE

G1987 - Metallic Structures

Degree in Civil Engineering

Academic year 2022-2023

1. IDENTIFYING DATA					
Degree	Degree in Civil Engineering			Type and Year	Compulsory. Year 4
Faculty	School of civil Engineering				
Discipline	ANALYSIS AND TECHNOLOGY OF STRUCTURES				
Course unit title and code	G1987 - Metallic Structures				
Number of ECTS credits allocated	6	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA ESTRUCTURAL Y MECANICA				
Name of lecturer	OSCAR RAMON RAMOS GUTIERREZ				
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Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 2. DESPACHO (2063)				
Other lecturers	ARTURO JOSE SANTAMARIA SALLAN				

3.1 LEARNING OUTCOMES
- To understand the mechanical behavior of structural steel.
- To apply safety criteria to steel structures
- To identify and evaluate the actions to be considered in the project of steel structures
- To calculate structural elements of steel at ultimate limit states
- To calculate structural elements of steel at serviceability limit states .
- To understand the general and specific aspects of the project, execution and control of steel structures
- To apply structural codes concerning the design and control of metallic structures.

4. OBJECTIVES

Students will acquire sufficient competence in the field of design and construction of steel structures

6. COURSE ORGANIZATION

CONTENTS	
1	Introduction. Safety criteria and design basis
2	Materials data for design.
3	Resistance limit state of cross sections. Tension, compression, bending, shear, torsion
4	Instability limit state
5	Serviceability limit states. Deformations. Vibrations
6	Bolted connections
7	Welded connections
8	Steel element design
9	Introduction to composite steel and concrete structures
10	Execution, control and maintenance of steel and composite steel and concrete structures

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Partial exam (Parts 1 to 5)	Written exam	No	Yes	35,00
Partial exam (Parts 6 to 10)	Written exam	No	Yes	35,00
Continuous assessment activities	Others	No	Yes	30,00
TOTAL				100,00
Observations				
In the recovery exam, the student who has passed any of the parts of the course (continuous assessment activities and / or partial exams) must only take the part (or parts) not passed. The recovery of the continuous assessment activities will be carried out by delivering them prior to the recovery exam.				
Observations for part-time students				
The assessment will be the same as that of full-time students				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Estructuras de acero. Vol 1. Argüelles Alvarez R. et al. Bellisco Ediciones. ISBN:84-95279-97-5

Eurocódigo EC-3 (estructuras de acero). UNE-EN 1993

Apuntes de la asignatura (Aula virtual)

