

Centre	University College of Engineering of Vitoria-Gasteiz
Name of subject	26048 – Industrial Structures and Buildings
Qualification	Degree in Mechanical Engineering
Type	Compulsory
Credits	9 ECTS
Year	3
Term(s)	2nd
Department	Mechanical Engineering
Language	English, Spanish and Basque

Outcomes / Objectives

Analysis of structures. Application to industrial building design and calculation.

Syllabus

Regulations and standards for metal structures.

Introduction to structural design.

Articulated node structures.

Rigid node structures.

Actions in building.

Characterisation of industrial buildings.

Introduction to reinforced concrete.

Basis for the calculation of reinforced concrete.

Dimensioning of reinforced concrete sections.

Matrix calculation of structures.

Methodology

Teaching Method

Face-to-Face Teaching Hours

Lectures	Seminars	Classroom practice	Lab. practice	Computer sessions	Clinical practice	Workshops	Industrial workshops	Field practice
60		21	9					

Student Hours of Non Face-To-Face Activities

Lectures	Seminars	Classroom practice	Lab. practice	Computer sessions	Clinical practice	Workshops	Industrial workshops	Field practice
90		32	13					

Assessment System

General criteria

- Written essay exam
- Practical tasks (exercises, case studies or problems)

Bibliography

Basic Bibliography

- 1. Real Decreto 2267/2004, de 3 de diciembre, por el que se aprueba el Reglamento de seguridad contra incendios en los establecimientos industriales.
- 2. Ley 38/1999 de 5 de noviembre: Ordenación de la edificación
- 3. Real Decreto 314/2006, de 17 de marzo, por el que se aprueba el Código Técnico de la Edificación
- 4. Código Técnico de Edificación (CTE)
- 5. Eurocode 3
- 6. Class notes on "Estructuras metálicas y mixtas", tomos 3 y 4 (versión 2006), Pedro Jose Landa Lazcano, Profesor de la Escuela superior de ingenieros de Bilbao
- 7. Arcelor (Aceralia) catalogues
- 8. La Instrucción española del hormigón estructural EHE-08
- 9. Eurocode 2