

## SUBJECT TEACHING GUIDE

### G1988 - CONSTRUCTIONS

#### Degree in Civil Engineering

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Degree in Civil Engineering			Type and Year	Compulsory. Year 4
Faculty	School of civil Engineering				
Discipline	CONSTRUCTIONS				
Course unit title and code	G1988 - CONSTRUCTIONS				
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	IGNACIO LOMBILLO VOZMEDIANO				
E-mail	ignacio.lombillo@unican.es				
Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 2. ALUMNOS DOCTORADO (2068)				
Other lecturers	YOSBEL BOFFILL ORAMA HAYDEE BLANCO WONG CESAR ALEJANDRO CARRASCO PAYERO				

### 3.1 LEARNING OUTCOMES

- Know and understand the functions and parts of the building.
- Know and understand the Law 38/1999 "Building ordinance".
- Know and understand part of the regulations contained in the "Building Spanish Code" (CTE).
- Ability to address the project, design, construction and maintenance of buildings, including structures, envelopes, finishings and facilities.
- Understand, from a technical point of view, the structural solutions that more regularly are used in the design and construction of buildings: foundations, retaining and basement walls, (one-way and reticular) slabs, load bearing walls and framework structures.
- Know the most significant aspects of the physical protection of buildings (thermal and acoustic aspects).
- Understand, from a technical point of view, the solutions of roofs and facades which more regularly are used in the design and construction of buildings.
- Understand, from a technical point of view, the operation and basic design of the building facilities: hydraulic, electrical and heating facilities.

### 4. OBJECTIVES

- Knowledge the regulations of the Law of "Building Ordinance-LOE" and "Spanish Building Code-CTE" and other complementary regulations ("Building Technological Regulations-NTE").
- Knowledge of the types and characteristics of the structures, facilities, envelopes and finishes that are regularly used in the project and the construction of buildings.
- Knowledge of terminology and associated concepts from the field of building.
- Knowledge of the physical and mechanical bases that govern the behaviour of buildings.
- Knowledge of the construction details of the different elements that constitute the buildings and their graphical representation .

### 6. COURSE ORGANIZATION

CONTENTS	
1	INTRODUCTION: Concept and importance. Functions and parts of the building. Law of Building Ordinance-LOE. Spanish Building Code-CTE.
2	Building Structures I: Actions. Foundations. Retaining and basement walls.
3	Building Structures II: Load bearing walls (masonry structures and concrete solutions).
4	Building Structures III: Framework structures (in situ and precast concrete, steel structures, and timber structures).
5	Building Structures IV: One-way and reticular slabs.
6	Building facilities I: Hydraulic facilities.
7	Building facilities II: Electrical facilities and heating.
8	Envelopes and finishings I: Introduction. Thermal (CTE DB-HE0 and CTE DB-HE1), acoustic (CTE DB-HR) and moisture protection (CTE DB-HS1).
9	Envelopes and finishings II: Roofs.
10	Envelopes and finishings III: Facades, partition walls, and finishings.

## 7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Written exam (thematic bloques 1-5)	Written exam	No	Yes	40,00
Written exam (thematic bloques 6-10)	Written exam	No	Yes	30,00
Group-work linked to computer issues	Work	No	No	20,00
Classroom participation	Others	No	No	10,00
<b>TOTAL</b>				<b>100,00</b>

### Observations

Note: According to RD 1125/2003, the results obtained by the student will be graded according to the following numerical scale from 0 to 10, with one decimal, to which the corresponding qualitative grade may be added:

0.0-4.9: Fail

5.0-6.9: Pass

7.0-8.9: Good

9.0-10.0: Outstanding

Only for duly justified reasons (e.g. health restrictions) may the examinations be organised remotely, with the prior authorisation of the Dean of the School.

In the event that, due to health restrictions, it is not possible to objectively verify that the student is following the course (classroom participation), this evaluation component will not be considered, and the percentages will be redistributed among the rest of the components as follows:

Written exam (thematic blocks 1-5): 45%.

Written exam (thematic blocks 6-10): 35%.

Group-work linked to computer issues: 20%

### Observations for part-time students

In the case of part-time course students, the evaluation consists on:

- Written exam (thematic bloques 1-5): 50%

- Written exam (thematic bloques 6-10): 50%

In addition to the extraordinary exam, a second-chance' examination will be held on the date of the ordinary final exam.

## 8. BIBLIOGRAPHY AND TEACHING MATERIALS

### BASIC

Apuntes docentes de la asignatura "EDIFICACIÓN". Departamento de Ingeniería Estructural y Mecánica, E.T.S. de Ingenieros de Caminos, Canales y Puertos de Santander.

LOE. Ley 38/199 de Ordenación de la Edificación.

CTE. Real Decreto 314/2006. Código Técnico de la Edificación.