

## SUBJECT TEACHING GUIDE

### 193 - Pathology and rehabilitation of built heritage

### Master's Degree in Historical and Territorial Heritage

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Master's Degree in Historical and Territorial Heritage			Type and Year	Optional. Year 1
Faculty	Faculty of Humanities				
Discipline					
Course unit title and code	193 - Pathology and rehabilitation of built heritage				
Number of ECTS credits allocated	3	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				
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Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 2. ALUMNOS DOCTORADO (2068)				
Other lecturers					

### 3.1 LEARNING OUTCOMES

- Knowledge related to the traditional buildings rehabilitation and their pathological processes.
- Methodology of investigation of pathological processes.
- Identification of the main defects that the traditional constructive elements present.
- Identification of the defects' causes: Mistakes in the project, in the construction process, usage of inappropriate materials, incorrect use of the building and/or lack of maintenance.
- Rehabilitation solutions.

#### 4. OBJECTIVES

- Learn about traditional buildings rehabilitation and their pathological processes.
- Know the methodology of investigation in this field of knowledge.
- Provide knowledge related to the main tests used in this field of knowledge (non and minor destructive tests, monitoring, etc.).
- Acquire ideas related to the main defects existing in traditional buildings and making possible that the student may plan, with coherence, therapeutical solutions focused on the main problems detected.

#### 6. COURSE ORGANIZATION

##### CONTENTS

1	General concepts: Building pathology and rehabilitation. General methodology of investigation.
2	Diagnosis of existing buildings: On-site inspection. Laboratory testing. Constructions monitoring. Examples of preliminary studies to rehabilitation, and pathology reports.
3	Rehabilitation of historical buildings: Foundations. Masonry structures (load bearing walls). Examples of studies conducted on buildings.
4	Rehabilitation of modern buildings: Concrete structures.

#### 7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Class attendance	Others	No	No	30,00
Written exam	Written exam	Yes	Yes	35,00
Group work	Work	No	Yes	35,00
TOTAL				100,00

##### Observations

In cases of private home confinement of students, for duly justified reasons (e.g. health restrictions), the activities may be organised remotely.

In the event that the face-to-face activity is suspended (due to health restrictions), the evaluation will be carried out in the following way:

- Class attendance will be verified by means of the monitoring of the classes given by telematic platform ( Teams or similar).
- The written exam will be a test and will be carried out using the Moodle tool.
- The Group Work will be sent by email, in digital format, and its oral presentation will be carried out by telematic platform (Teams or similar).

##### Observations for part-time students

In the case of part-time course students, the evaluation consists on a written exam.

#### 8. BIBLIOGRAPHY AND TEACHING MATERIALS

##### BASIC

- Apuntes de las clases de esta Asignatura.
- Libros de Rehabilitación de G. Lozano. Asturias, 2005.
- Patología del Hormigón. - M. Fernández Canovas, 2001.

