

## SUBJECT TEACHING GUIDE

M1829 - Pathology and rehabilitation of built heritage

Master's Degree in Historical and Territorial Heritage

Academic year 2021-2022

| 1. IDENTIFYING DATA              |  |                  |                    |
|----------------------------------|--|------------------|--------------------|
| Degree                           | Master's Degree in Historical and Territorial Heritage |                  | Optional. Year 1   |
| Faculty                          | Faculty of Humanities                                  |                  |                    |
| Discipline                       |  |                  |                    |
| Course unit title and code       | M1829 - 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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| 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. Examples of studies conducted on buildings.   |

#### 7. ASSESSMENT METHODS AND CRITERIA

| Description  | Type         | Final Eval. | Reassessn | %      |
|--|--------------|-------------|-----------|--------|
| Class attendance   | Others       | No          | No        | 50,00  |
| Written exam   | Written exam | Yes         | Yes       | 30,00  |
| Group work   | Work         | No          | Yes       | 20,00  |
| TOTAL  |              |             |           | 100,00 |
| Observations   |              |             |           |        |
| 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.
- Manual para la redacción de informes técnicos en construcción- J. Calavera. Intemac 2009.
- Patología de estructuras de hormigón - J., Calavera. Intemac, 2009.
- Patologia del Hormigón. - M. Fernández Canovas, 2001.