

COURSE NAME

Name: **BUILDING**

Code: 101149

Curriculum: **DEGREE IN CIVIL ENGINEERING**

Year: 3

Subject: BUILDING AND PREFABRICATION

Nature: OBRIGATORY Duration: SECOND SEMESTER

ECTS Credits: 6

Classroom hours: 60

Face-to-face classroom percentage: 40%

Non-contact hours: 90

FACULTY DETAILS

Name: BARBUDO MUÑOZ, MARÍA AUXILIADORA (Coordinator)

Department: RURAL ENGINEERING

Area: CONSTRUCTION ENGINEERING

Location of the office: Aulario Emilio Iznardi (EPSBelmez); Edificio Leonardo Da Vinci (Campus de Rabanales)

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Name: TAGUAS RUIZ, FRANCISCO JESÚS

Department: RURAL ENGINEERING

Area: CONSTRUCTION ENGINEERING

Location of the office: EPS Belmez

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Name: SUESCUM MORALES, DAVID

Department: RURAL ENGINEERING

Area: CONSTRUCTION ENGINEERING

Location of the office: Aulario Emilio Iznardi (EPSBelmez); Edificio Leonardo Da Vinci (Campus de Rabanales)

E-Mail: david.suescum@uco.es

Phone number: 957213040

SKILLS

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| CB1 | Have and understand specific knowledge of the study area of the Degree that gives skills for the exercise of the profession of Technical Civil Engineering. |
| CB2 | Have and understand current and cutting-edge knowledge of the field of mining engineering. |
| CB3 | Be able to apply the knowledge acquired to their work or vocation in a professional manner. Prepare and defend arguments in the relevant knowledge area. |
| CB7 | Possess the learning skills necessary to undertake studies with a high degree of autonomy |
| CU2 | Know and refine the user level of ITs. |
| CECC2 | Have and understand current and cutting-edge knowledge in the field of mining engineering. |

OBJECTIVES

Provide students with the knowledge necessary to design, calculate, construct and execute building works through knowledge of the mandatory technical regulations for use in building, the design of simple reinforced concrete structural elements - pillars - beams - slabs - foundations and earth retention structures.

Understand the construction systems and installations in building construction, as well as the importance of correct design to obtain efficient buildings.

First contact with the BIM method in Construction.

SDGs:

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- Ensure inclusive, equitable and quality education and promote lifelong learning opportunities for all.
 - Ensure sustainable consumption and production patterns
 - Ensure access to affordable, secure, sustainable and modern energy for all
 - Build resilient infrastructure, promoting inclusive and sustainable industrialisation and fostering innovation
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- Making cities and human settlements inclusive, safe, resilient and sustainable

CONTENTS:

1. Theoretical contents

TOPIC 1. BUILDINGS AND STRUCTURAL TYPOLOGIES.
TOPIC 2. REGULATORY FRAMEWORK FOR BUILDING.
TOPIC 3. WIND ACTION ON BUILDINGS
TOPIC 4. ROOFS AND SLABS.
TOPIC 5. FOUNDATION TYPOLOGIES.
TOPIC 6. ANALYSIS AND SIZING.
TOPIC 7. DIRECT FOUNDATIONS: CHECKS.
TOPIC 8. CHECKING THE STRUCTURAL CAPACITY OF THE FOUNDATION: RIGID ISOLATED FOOTING.
TOPIC 9. CHECKING THE STRUCTURAL CAPACITY OF THE FOUNDATION: FLEXIBLE ISOLATED FOOTING.
TOPIC 10. EARTH RETENTION STRUCTURES.
TOPIC 11. ENERGY EFFICIENCY.

2. Practical contents.

Calculating floor structures and slabs in building construction using CYPECAD
Building Information Modelling (BIM) in Engineering (REVIT)