

## 30748 - Architecture and Sustainability

### Información del Plan Docente

Academic Year	2017/18
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	470 - Bachelor's Degree in Architecture Studies
ECTS	6.0
Year	5
Semester	Second semester
Subject Type	Optional
Module	---

### **1.General information**

#### **1.1.Introduction**

#### **1.2.Recommendations to take this course**

#### **1.3.Context and importance of this course in the degree**

#### **1.4.Activities and key dates**

### **2.Learning goals**

#### **2.1.Learning goals**

#### **2.2.Importance of learning goals**

### **3.Aims of the course and competences**

#### **3.1.Aims of the course**

#### **3.2.Competences**

### **4.Assessment (1st and 2nd call)**

#### **4.1.Assessment tasks (description of tasks, marking system and assessment criteria)**

### **5.Methodology, learning tasks, syllabus and resources**

#### **5.1.Methodological overview**

The course consists of a theoretical part in which knowledge about techniques for a more sustainable architecture is introduced.

In parallel, practical activities are devoted to the development of a project that consists of checking the energy demand of a building and generating its energy certification by means of official software. The exercises are performed individually during the semester and are supervised during the course, thus allowing a continuous evaluation.

### 5.2.Learning tasks

The program that students are offered to help them achieve the expected results includes

Total hours of student work: 150 hours (6 ECTS )  
Theoretical credits: 75 hours (3 ECTS )  
Practical credits: 75 hours (3 ECTS )

Classroom activities

1. Theoretical and problems resolution classes (large group).
2. Practical classes (intermediate group).
  - Case study discussions.
  - Tutorial sessions.
3. Visits to on-site building constructions, buildings or conferences.
4. Scheduled tutoring.
5. Written test

Distance activities

6. Studying and individual work.
7. Performing tasks and projects individually and/or in small groups.

### 5.3.Syllabus

Sustainability in Architecture:

- Architecture and sustainability throughout history
- Passive house standard and sustainability certifications (VERDE, Hades , Perfil de Calidad, etc.) .
- Examples of sustainable buildings.

Sustainable use of natural resources

- Sustainable management of materials and waste.
- Efficiency in water consumption.

Energy saving

- Limitation of energy demand of the building
- Energy efficiency in facilities
- Integration of renewable energy
- Energy certification

### 5.4.Course planning and calendar

Theoretical classes of 2 hours per week according to the School schedule.

Practical classes of 2 hours per week according to the School schedule.

The course assignments will have partial pre-delivery and final delivery dates that will be defined at the beginning of the course.

## **30748 - Architecture and Sustainability**

The date of the theoretical test will be included in the School exams calendar.

### **5.5. Bibliography and recommended resources**