

## 60829 - Materials for industrial applications

### Syllabus Information

**Academic Year:** 2019/20

**Subject:** 60829 - Materials for industrial applications

**Faculty / School:** 110 - Escuela de Ingeniería y Arquitectura

**Degree:** 532 - Master's in Industrial Engineering

**ECTS:** 6.0

**Year:** 2

**Semester:** First semester

**Subject Type:** Optional

**Module:** ---

### 1.General information

#### 1.1.Aims of the course

#### 1.2.Context and importance of this course in the degree

#### 1.3.Recommendations to take this course

### 2.Learning goals

#### 2.1.Competences

#### 2.2.Learning goals

#### 2.3.Importance of learning goals

### 3.Assessment (1st and 2nd call)

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

### 4.Methodology, learning tasks, syllabus and resources

#### 4.1.Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. It is based on cooperative learning and problem-based learning. It focuses on the study of industrial materials to understand their applications in different fields.

#### 4.2.Learning tasks

The course includes the following learning tasks:

- Lectures.
- Case studies and problem-solving tasks.
- Laboratory sessions.
- Visits to companies and laboratories involved in laser material processing.
- Workshops.

#### 4.3.Syllabus

The course will address the following topics:

1. Materials for structural applications

2. Materials for functional applications
3. New materials for structural and functional applications
4. Procedures for selection of materials
5. Materials and their environmental impact

#### **4.4.Course planning and calendar**

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the EINA website.

#### **4.5.Bibliography and recommended resources**