

## 29720 - Manufacturing Technology I

### Información del Plan Docente

<b>Academic Year</b>	2016/17
<b>Academic center</b>	110 - Escuela de Ingeniería y Arquitectura
<b>Degree</b>	434 - Bachelor's Degree in Mechanical Engineering 330 - Complementos de formación Máster/Doctorado
<b>ECTS</b>	6.0
<b>Course</b>	XX
<b>Period</b>	Half-yearly
<b>Subject Type</b>	ENG/Complementos de Formación, Compulsory
<b>Module</b>	---

### **1.Basic info**

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

#### **1.2.Activities and key dates for the course**

### **2.Initiation**

#### **2.1.Learning outcomes that define the subject**

#### **2.2.Introduction**

### **3.Context and competences**

#### **3.1.Goals**

#### **3.2.Context and meaning of the subject in the degree**

#### **3.3.Competences**

#### **3.4.Importance of learning outcomes**

### **4.Evaluation**

### **5.Activities and resources**

#### **5.1.General methodological presentation**

#### **5.2.Learning activities**

#### **5.3.Program**

1) Classification of manufacturing processes.

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### 2) Metrology

1. Inspection and industrial metrology.
2. Systems and methods of measurement.
3. Measurement assurance.

### 3) Quality

1. Fundamental concepts of quality.
2. Quality management
3. Quality planning.
4. Quality in product design and process.
5. Manufacturing quality.

### 4) Fundamentals of machining processes.

1. Technological aspects of common machining processes: turning, drilling, milling.
2. Tools: materials, geometry and selection criteria.
3. Abrasive machining processes.
4. Unconventional machining processes: EDM

### 5) Fundamentals of metal-cutting

1. Mechanics of metal-cutting.
2. Temperatures in metal-cutting.
3. Tool life.
4. Cutting fluids.
5. High speed machining.
6. Economics of metal-cutting operations.

### 6) Machining systems.

1. Manufacturing systems and automation.
2. Jig & Fixtures.
3. Programming tool machines.

### 7) Manufacturing process planning.

## 5.4.Planning and scheduling

## 5.5.Bibliography and recommended resources