

## 29752 - Industrial hydraulics and pneumatics

### Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	434 - Bachelor's Degree in Mechanical Engineering
ECTS	6.0
Course	4
Period	Second semester
Subject Type	Optional
Module	---

### 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

#### INTRODUCTION

Characteristics and use of hydraulics and pneumatics.

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Similarities and differences between them.

### VALVES

Directional control, pressure control and flow control.

Types. Constitution. Operation. Uses

### ACTUATORS

Linear and rotary. Types. Characteristics. Construction. Use.

### ELEMENTAL CIRCUITS

Examples of basic circuits.

constituent parts.

Behavioral analysis.

Introduction of auxiliary elements in the circuits.

### SYSTEMATIC DESIGN.

Design rules. Cascaded memories. Memories step by step.

### SIZING OF ELEMENTS OF FACILITIES.

Valve operating diagrams, flow rates, volumes and positions.

Calculation of deposits.

### GENERATION AND TRANSPORT OF FLUID PRESSURE

Pump and Compressor groups.

Types, features and functionality.

Compressed air conditioning.

Distribution networks.

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### **5.4.Planning and scheduling**

### **5.5.Bibliography and recomended resources**