

## 29801 - Mathematics II

### Información del Plan Docente

<b>Academic Year</b>	2016/17
<b>Academic center</b>	110 - Escuela de Ingeniería y Arquitectura 326 - Escuela Universitaria Politécnica de Teruel
<b>Degree</b>	440 - Bachelor's Degree in Electronic and Automatic Engineering 444 - Bachelor's Degree in Electronic and Automatic Engineering
<b>ECTS</b>	6.0
<b>Course</b>	1
<b>Period</b>	Half-yearly
<b>Subject Type</b>	Basic Education
<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

CAMPUS RIO EBRO, ZARAGOZA

6 ECTS (150 hours):

## 29801 - Mathematics II

- Learning outcomes 2.4 ECTS (60 hours)
- Workload: 3.6 ECTS (90 hours)

### **CAMPUS DE TERUEL**

The methodology of the course is based on:

- Lectures.
- Problem solving.
- Computer lab sessions using mathematical software.

## **5.2.Learning activities**

### **CAMPUS RIO EBRO, ZARAGOZA**

- Theoretical classes: 42 hours
- Computer laboratory: 12 hours
- Continuous assessments (written exams): 6 hours

### **CAMPUS DE TERUEL**

In order that students get the learning outcome, the following learning activities are offered:

#### **1. Lectures and problem solving**

One of the main resources in order a student gets the corresponding learning outcome are lectures mixed with problem solving.

#### **2. Computer lab sessions**

Students spend parts of their time doing a wide range of computer lab work in small groups.

#### **3. Problem solving for each topic in the program**

Students, divided into small groups, will solve a set of problems for each topic in the program. Feedback on assessment will be provided.

#### **4. Continual assessments (written exams)**

#### **5. Tutorial**

#### **6. Final exams**

## **5.3.Program**

This is a typical matrix-oriented module of Linear Algebra for Engineers.

Outline:

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- Matrix Algebra: Matrices, determinants and linear systems of equations
- Vector spaces
- Euclidean space
- Linear transformations
- Eigenvalues, eigenvectors and diagonalization of matrices
- Iterative methods for linear systems

### 5.4.Planning and scheduling

Schedule of classes is established by EINA and EUP de Teruel, and it will be published before starting the academic year.

Each Professor will provide a schedule for tutorial.

Other activities will be scheduled according to the number of students and will be announced in advance (<http://add.unizar.es>).

### 5.5.Bibliography and recommended resources