

## 29605 - Mathematics II

### Información del Plan Docente

<b>Academic Year</b>	2016/17
<b>Academic center</b>	110 - Escuela de Ingeniería y Arquitectura
<b>Degree</b>	430 - Bachelor's Degree in Electrical 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**

Mixed methodology based on lectures for the whole class, in the laboratory classes in small groups and cooperative work for the resolution of a problem or the realization of a project team.

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

The learning process is based on the following:

- Lectures: 42 hours

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- Laboratory sessions: 12 horas
- Team work: 3 horas.
- Exam: 3 horas.
- Test online.

### 5.3.Program

1. Direct methods for solving linear systems.
2. Matrices.
3. Vector Spaces and Subspaces.
4. Finite Dimensional Vector Spaces.
5. Inner Product Spaces.
6. Orthogonal Projections and Fourier approximations.
7. Eigenvalues, Eigenvectors and Diagonalization of Matrices.
8. An Introduction to Laplace Transform.
9. Differential Geometry.

### 5.4.Planning and scheduling

- The class schedule is established by the Centre and published on its website.
- The timetable for submission of assignments and test is published and communicated to the students at the beginning of the course.

### 5.5.Bibliography and recommended resources

*Bibliography* can be found in <http://psfunizar7.unizar.es/br13/eGrados.php?id=220>