

27000 - Linear algebra

Información del Plan Docente

Academic Year	2017/18
Faculty / School	100 - Facultad de Ciencias
Degree	453 - Degree in Mathematics
ECTS	13.5
Year	1
Semester	Annual
Subject Type	Basic Education
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

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

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

The general teaching methodology designed for this class is based on the following:

- Lectures

- Problem sessions

- Office hours
- Students' individual work

5.2.Learning tasks

In addition to the above activities, throughout the course the students are provided with four sets of exercises to be solved and expounded to one of the teachers during office hours.

5.3.Syllabus

1. Vector Spaces
2. Linear Mappings and Matrices
3. Rank
4. Integer Matrices and Polynomial Matrices
5. Linear, Bilinear and Hermitian Forms
6. Eigenvectors and Eigenvalues
7. Theory of an Endomorphism
8. Euclidean and Unitary Spaces
9. Endomorphisms of Euclidean and Unitary Spaces
10. Applications to Geometry

5.4.Course planning and calendar

See the academic calendar of the *Universidad de Zaragoza* and the class schedules published on the *Facultad de Ciencias* webpage. The exact time and place of the examinations will be announced in class and posted on a bulletin board and on the online platform (*ADD*).

5.5.Bibliography and recommended resources

Notes on the theoretical part of the lessons will appear in the *ADD* before they are given. A number of problems are supplied as well.