

27000 - Linear algebra

Syllabus Information

Academic Year: 2020/21

Subject: 27000 - Linear algebra

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.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

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

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, problem-solving sessions, tutorials and autonomous work and study.

4.2.Learning tasks

The teaching activities and assessment tasks will take place in a face-to-face mode, except in the case that, due to the health situation, the dispositions emitted by the competent authorities and by the University of Zaragoza compel to take them in a telematic form.

4.3.Syllabus

This course will address the following topics:

- **Topic 1.** Systems of linear equations and matrices
- **Topic 2.** Vector spaces
- **Topic 3.** Linear transformations
- **Topic 4.** Dual spaces
- **Topic 5.** Determinants

- **Topic 6.** Diagonalisation
- **Topic 7.** Canonical forms
- **Topic 8.** Euclidean and unitary spaces
- **Topic 9.** Operators in Euclidean and unitary spaces
- **Topic 10.** Bilinear, quadratic and Hermitian forms

4.4. Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the Faculty of Sciences website and Moodle.

4.5. Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=27000&year=2020