

30203 - Mathematics II

Syllabus Information

Academic Year: 2020/21

Subject: 30203 - Mathematics II

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
326 - Escuela Universitaria Politécnica de Teruel

Degree: 443 - Bachelor's Degree in Informatics Engineering
439 - Bachelor's Degree in Informatics Engineering

ECTS: 6.0

Year: 1

Semester: First semester

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.
- Computer lab sessions using mathematical software.

4.2.Learning tasks

The course includes the following learning tasks:

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

4.3.Syllabus

This is a typical matrix-oriented module of Linear Algebra for Engineers. The course will address the following topics:

- Algebraic structures
- Matrix Algebra: Matrices, determinants and linear systems of equations
- Vector spaces
- Orthogonality
- Linear transformations
- Eigenvalues, eigenvectors and diagonalization of matrices
- Numerical methods for linear system

4.4.Course planning and calendar

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 the tutorials.

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

4.5.Bibliography and recommended resources