29801 - Mathematics II

Información del Plan Docente

Academic Year	2017/18
Faculty / School	110 - Escuela de Ingeniería y Arquitectura 326 - Escuela Universitaria Politécnica de Teruel
Degree	440 - Bachelor's Degree in Electronic and Automatic Engineering 444 - Bachelor's Degree in Electronic and Automatic Engineering
ECTS	6.0
Year	1
Semester	Half-yearly
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

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6 ECTS (150 hours):

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

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The methodology of the course is based on:

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

5.2.Learning tasks

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

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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.Syllabus

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

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Outline:

- 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.Course planning and calendar

Schedule of classes is stablished 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