Universidad Zaragoza

30306 - Mathematics III

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 learning process designed for this course is based on the following:

- Continuous work of the student: study of the theory content, review of the documentation

made available for the student and lookup of the bibliography, solution of problems,

exercises and questions on the subject.

- Lectures where the theoretical contents will be developed. They will be illustrated with

examples and counterexamples for helping to understand them.

- Laboratory sessions: students will solve problems and exercises with the help of a

computer.

- Problems sessions where concepts and techniques presented in lectures will be further

developed.

4.2.Learning tasks

he course is organized according to:

Type I: Lectures (42 hours).

Type II: Laboratory sessions (12 hours).

Type III: Tutorial sessions of problems (6 hours).

> Lectures: the professor will explain the theoretical contents of the course and solve illustrative applied problems. These probler
> exercises can be found in the problem set provided at the beginning of the semester. Lectures run for 3 weekly hours. Althoug
> mandatory activity, regular attendance is highly recommended.
>
> Laboratory sessions: sessions will take place every 2 weeks (6 sessions in total) and last 2 hours each. Students will use math
> software to work the contents of the course.
>
> Tutorial sessions of problems: Problems will be considered in order to help the understanding of the contents seen in lectures.

4.3.Syllabus

he course will address the following topics:

heory sessions

- Improper and parametric integrals.

- Double and triple integrals.

- Vector calculus.

- Complex integration.

- Interpolation and numerical integration.

- Differential equations.

4.4.Course planning and calendar

For further details concerning the timetable, classroom and further information regarding this

course, please refer to the Escuela de Ingeniería y Arquitectura de la Universidad de

Zaragoza, website, https://eina.unizar.es/ .

4.5.Bibliography and recommended resources