

26803 - Mathematics

Syllabus Information

Academic Year: 2022/23

Subject: 26803 - Mathematics

Faculty / School: 100 - Facultad de Ciencias

Degree: 297 - Degree in Optics and Optometry

ECTS: 9.0

Year: 1

Semester: Annual

Subject Type: Basic Education

Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

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 theory sessions, autonomous works, courseworks, group works and assignments.

Students are expected to participate actively in the class.

Classroom materials will be available via Moodle. These include a repository of the lecture notes used in class, the course syllabus, as well as other course-specific learning materials.

Further information regarding the course will be provided in the first week of class.

4.2. Learning tasks

This is a 9 ECTS course organized as follows:

? **Lectures and problem sessions** (7.5 ECTS: 75 hours). Lecture notes and a set of problems (and their corresponding solutions) will be available for the students. At the end of each topic, some of the problems will be solved in class by the teacher and the rest will be done individually.

? **Laboratory sessions and assignments** (1.5 ECTS: 15 hours). Two-hour sessions that take place approximately once a month. Students are provided in advance with task guidelines for each session. Individually or in small groups on lab reports and different assignments during the course.

4.3. Syllabus

The course will address the following topics:

- 1.- Geometry and Trigonometry
- 2.- Linear equations. Matrices. Transformations.
- 3.- Complex numbers.
- 4.- Real functions. Continuity. Derivability.

5.- Plane curves. Representations. Conics.

6.- Functions of several variables.

7.- Integration. Applications.

8.- Power series.

9.- Surfaces. Representations.

4.4. Course planning and calendar

Information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided in the first week of class or please refer to the "Facultad de Ciencias" website <https://ciencias.unizar.es>

4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=26803>