

30701 - Mathematics 1

Syllabus Information

Academic Year: 2019/20

Subject: 30701 - Mathematics 1

Faculty / School: 110 -

Degree: 470 - Bachelor's Degree in Architecture Studies

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 the course is oriented towards...

Most of central ideas and topics are given by lectures to the whole group of students. They

Students are expected to participate actively in the class throughout the semester.

For the proper monitoring of the subject the student must perform an ongoing study from the beginning of class. To support the student will have the assistance of the teacher, both in the classroom and the tutorial sessions.

4.2.Learning tasks

The program offered to the student to help him achieve the expected results includes the following

4.3.Syllabus

The course will address the following topics:

Algebra

- Algebraic structures.
- Linear spaces. Properties.
- Linear applications. Matricial representation.
- Diagonalization. Applications.

Affine and euclidean geometry

- Geometrical applications of linear Algebra. Basic concepts on affine geometry and its most important elements.
- Metric geometry. The golden proportion.

Calculus. Functions of one variable

- Real functions of real variable. Limits and continuity.
- Derivability. Applications.
- Approximation.
- Integration. Geometrical applications.
- Numerical methods of solving equations. Approximation and interpolation of real functions of real variable.

4.4.Course planning and calendar

- Schedules and classrooms for lectures, problem classes and computer classes may be found at <http://eina.unizar.es>
- Scheduling of examinations is agreed by the School Board and are available at <http://eina.unizar.es>
- Deadlines for intermediate examinations and submission of group work will be announced in

4.5.Bibliography and recommended resources

- **Bibliography**

- David C. Lay, ?Álgebra lineal y sus aplicaciones?
Pearson Addison Wesley (3ª Ed.), 2007.
- Gilbert Strang, ?Álgebra lineal y sus aplicaciones?
International Thomson, (4ª Ed.), 2007.
- Salas, Hille y Etgen, ?Calculus. Una y varias variables?
Reverté, (4ª Ed.), 2002