

# 30306 - Mathematics III

#### Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	438 - Bachelor's Degree in Telecomunications Technology and Services Engineering
ECTS	6.0
Course	1
Period	Second semester
Subject Type	Basic Education
Module	
1.Basic info	

### 1.1.Recommendations to take this course

### 1.2. Activities and key dates for the course

- 2.Initiation
- 2.1.Learning outcomes that define the subject
- 2.2.Introduction
- 3.Context and competences
- 3.1.Goals
- **3.2.Context and meaning of the subject in the degree**
- 3.3.Competences
- 3.4.Importance of learning outcomes
- 4.Evaluation

### 5. Activities and resources

### 5.1.General methodological presentation

The learning process designed for this course is based in the following

Continuous work of the student: study of the theory, 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.

Practical sessions with the help of a computer. Problems and exercises will be considered in these sessions.

Sessions of problems integrated in the lectures where concepts and techniques presented will be further developed.



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## 5.2.Learning activities

The program offered to the student to achieve the results consists of the following activities

Type I: Lectures. 3 hours in the week will be devoted to lectures and problem sessions. In the lectures, the contents and theoretical results will be presented and this will be complemented with the solution of problems and exercises. Both activities will be combined to get the the concept in the course will be as clear as possible. Questions and short debates will be used to promote the participation of the student.

A collection of problems and exercises can be made available to the students. Some problems will be solved in the classroom and others will be used as recommended work outside the classroom.

Type II: Practical sessions (6 sessions of 2 hours each). The students will be distributed in 3 subgroups and will take place in the classroom and schedule fixed by the school. In these sessions, the students should be working the proposed exercises both written in a paper or with the computer under the supervision of the professor.

Type III: Tutorial sessions of problems (6 sessions of 1 hour each). Problems will be considered in order to help the understanding of the contents and to relate the concepts and the techniques in each subject.

## 5.3.Program

- Improper and parametric integrals
- Double and triple integrals
- Vector calculus
- Integration of functions of a complex variable
- Interpolation and numerical integration
- Differential equations

## 5.4. Planning and scheduling

Schedule of classroom sessions and presentation of assignments The schedule of lectures and the practical sessions is established by the school

Exam calendar: fixed by the school

Each teacher will inform about the schedule of tutorials

Exam time: It will be fixed by the professor according to the University regulations.

## 5.5.Bibliography and recomended resources