30338 - High Frequency: the Basics

Información del Plan Docente

Academic Year	2017/18
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	438 - Bachelor's Degree in Telecomunications Technology and Services Engineering
ECTS	6.0
Year	3
Semester	Second semester
Subject Type	Compulsory
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

5.2.Learning tasks

5.3.Syllabus

Chapter 1. Introduction and goals of the subject (1h).

Chapter 2. Circuit theory for microwave waveguides (5h).
Chapter 3. Passive microwave circuits (6h).
Chapter 4. Resonators and microwave filters (7h).
Chapter 5. Diodes and microwave transistors.
Chapter 6. Microwave amplifiers.
Tema 7. Introduction to nonlinear microwave circuits: Mixers and Oscillators.
LABORATORY WORKS:
TL1. Microwave filter design using CAD tools.
TL2. Linear and narrow bandwidth microwave amplifier design using CAD tools.
TL3. Low noise microwave amplifier design using CAD tools.
TL4. Power measurements in microwave networks.
TL5. The vectorial network analyzer.

5.4.Course planning and calendar

5.5.Bibliography and recommended resources