

## 30338 - High Frequency: the Basics

### Información del Plan Docente

<b>Academic Year</b>	2016/17
<b>Academic center</b>	110 - Escuela de Ingeniería y Arquitectura
<b>Degree</b>	438 - Bachelor's Degree in Telecommunications Technology and Services Engineering
<b>ECTS</b>	6.0
<b>Course</b>	3
<b>Period</b>	Second semester
<b>Subject Type</b>	Compulsory
<b>Module</b>	---

### **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**

#### **5.2.Learning activities**

#### **5.3.Program**

Chapter 1. Introduction and goals of the subject (1h).  
Chapter 2. Circuit theory for microwave waveguides (5h).  
Chapter 3. Passive microwave circuits (6h).

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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.Planning and scheduling

### 5.5.Bibliography and recommended resources