

## 30337 - Telecommunications Services and Systems

### 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>	
<b>Period</b>	Second semester
<b>Subject Type</b>	
<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**

1. Lectures (42 hours).
2. Problems (10 hours)
- 3.

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Laboratory (8 hours): 4 sessions of 2 hours each.

4. Group assignments.
5. Academic tutoring.

### 5.2.Learning activities

Lectures: 42 hours presenting the contents of the course

Problems: 10 hours resolving problems and practice cases

Laboratory assignments: 4 sessions of 2 hours each

Group assignments: each group of students, under the supervision of a teacher, will be assigned a case study related to telecommunication systems

### 5.3.Program

**1. International Telecommunication Organizations and Normative.**

**2. Telecommunication Infrastructures.**

**3. Positioning Systems**

**4. Fixed Systems and Services**

**5. Mobile Systems and Services**

**6. Broadcasting Systems and Services**

### 5.4.Planning and scheduling

The schedule for lecture and laboratory sessions and the evaluation dates will be provided by the university before the beginning of the semester.

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### 5.5. Bibliography and recommended resources

- 1. Horak, R. Telecommunications and data communications handbook / R. Horak. Wiley, 2007.
- 2. Keiser, Gerd. Optical Fiber communications / Gerd Keiser . - 2nd edition New York [etc.] : McGraw-Hill, cop. 1991
- 3. Gowar, John. Optical communication systems / John Gowar . - 2nd. ed. New York [etc.] : Prentice Hall, cop. 1993
- 4. Antenas / Angel Cardama Aznar ... [et al.] . - 2ª ed., reimp. Barcelona : UPC, 2005
- 5. Hernando Rábanos, José María. Transmisión por radio / José María Hernando Rábanos . - 3a. ed. Madrid : Centro de Estudios Ramón Areces, 1998
- 6. Forsell, Borje. Radionavigation systems / Forsell, B. Prentice Hall 1991
- 7. Logsdon, Tom. The Navstar Global positioning system / Tom Logsdon New York, etc. : Van Nostrand reinhold, 1992
- [www.mityc.es/telecomunicaciones / Infraestructuras /](http://www.mityc.es/telecomunicaciones/Infraestructuras/)
- BOE