Course guides  
230053 - ANTENES - Antennas

Unit in charge: Barcelona School of Telecommunications Engineering  
Teaching unit: 739 - TSC - Department of Signal Theory and Communications.

Degree: 
BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (Syllabus 2010). (Compulsory subject).
BACHELOR'S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Optional subject).

Academic year: 2020  
ECTS Credits: 6.0  
Languages: Catalan, Spanish

LECTURER

Coordinating lecturer: Blanch Boris, Sebastia
Others: Blanch Boris, Sebastia

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Generic:
12 CPE N3. They will be able to identify, formulate and solve engineering problems in the ICC field and will know how to develop a method for analysing and solving problems that is systematic, critical and creative.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours small group</td>
<td>13,0</td>
<td>8.67</td>
</tr>
<tr>
<td>Self study</td>
<td>85,0</td>
<td>56.67</td>
</tr>
<tr>
<td>Hours large group</td>
<td>52,0</td>
<td>34.67</td>
</tr>
</tbody>
</table>

Total learning time: 150 h

CONTENTS

(ENG) Tema 0. Course presentation

Description: Course introduction

Full-or-part-time: 1h
Theory classes: 1h
### Tema 1. Radiation fundamentals.

**Description:**

**Full-or-part-time:** 15h 20m  
Theory classes: 5h  
Laboratory classes: 2h  
Self study: 8h 20m

### Tema 2. Analysis of basic antennas.

**Description:**

**Full-or-part-time:** 49h  
Theory classes: 18h  
Laboratory classes: 1h  
Self study: 30h

### Tema 3. Antenna arrays.

**Description:**

**Full-or-part-time:** 40h 20m  
Theory classes: 14h  
Laboratory classes: 3h  
Self study: 23h 20m

### Tema 4. Aperture antennas

**Description:**

**Full-or-part-time:** 39h 20m  
Theory classes: 14h  
Laboratory classes: 2h  
Self study: 23h 20m

### ACTIVITIES

- **(ENG) Proves de resposta curta (Control)**
- **(ENG) Proves de resposta curta (Control)**
**GRADING SYSTEM**

The evaluation is done using two controls with a 15% weight each, 10% of practices and a final exam with a 60% weight

This course will assess generic skills:
- Ability to identify, formulate and solve engineering problems (Middle Level)
- Knowledge of and experimentation? Instruments and tools (Middle Level)

**BIBLIOGRAPHY**

**Basic:**