230053 - ANTENES - Antennas

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering
Teaching unit: 739 - TSC - Department of Signal Theory and Communications
Academic year: 2017
Degree: BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (Syllabus 2010). (Teaching unit Compulsory)
BACHELOR'S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Teaching unit Optional)
ECTS credits: 6
Teaching languages: Catalan, Spanish

Teaching staff
Coordinator: Blanch Boris, Sebastia
Others: Blanch Boris, Sebastia

Degree competences to which the subject contributes

Generical:
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.

Learning objectives of the subject

Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 52h</th>
<th>34.67%</th>
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<tbody>
<tr>
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<td>Hours small group: 13h</td>
<td>8.67%</td>
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<tr>
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<td>Self study: 85h</td>
<td>56.67%</td>
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## Content

| (ENG) Tema 0. Course presentation | Learning time: 1h  
Theory classes: 1h |
<table>
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Course introduction</td>
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| (ENG) Tema 1. Radiation fundamentals. | Learning time: 15h 20m  
Theory classes: 5h  
Laboratory classes: 2h  
Self study: 8h 20m |
|--------------------------------------|---------------------|

| (ENG) Tema 2. Analysis of basic antennas. | Learning time: 49h  
Theory classes: 18h  
Laboratory classes: 1h  
Self study: 30h |
|------------------------------------------|-------------------|

| (ENG) Tema 3. Antenna arrays. | Learning time: 40h 20m  
Theory classes: 14h  
Laboratory classes: 3h  
Self study: 23h 20m |
|-----------------------------|-------------------|
### (ENG) Tema 4. Aperture antennas

**Learning time:** 39h 20m  
Theory classes: 14h  
Laboratory classes: 2h  
Self study: 23h 20m

**Description:**  

### Planning of activities

- **(ENG) Proves de resposta curta (Control)**
- **(ENG) Proves de resposta curta (Control)**
- **(ENG) Altres activitats**
- **(ENG) Pràctica de laboratori**
- **(ENG) Pràctica de laboratori**
- **(ENG) Pràctica de laboratori**
- **(ENG) Pràctica de laboratori**
- **(ENG) Proves de resposta llarga (Examen Final)**
Qualification 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: