230251 - RAD - Radar

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering
Teaching unit: 739 - TSC - Department of Signal Theory and Communications
Academic year: 2019

Degree:
- BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
- BACHELOR'S DEGREE IN TELECOMMUNICATIONS SCIENCE AND TECHNOLOGY (Syllabus 2010). (Teaching unit Optional)
- BACHELOR'S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Teaching unit Optional)

ECTS credits: 6

Teaching languages: Catalan, Spanish, English

Teaching staff
Coordinator: ANTONI BROQUETAS
Others: Broquetas Ibars, Antoni

Prior skills
Radiation and Propagation, Signals and Systems, Probability and Stochastic Processes

Teaching methodology
- Lectures
- Application classes
- Exercises

Learning objectives of the subject
We present the fundamentals and techniques of radio detection, location and estimation of parameters of distant bodies. The course has a telecom. system orientation combining a wide range of technical disciplines seen in previous courses applied to aerospace, navigation and industrial needs.

Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group:</th>
<th>Self study:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>52h</td>
<td>98h</td>
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<tr>
<td></td>
<td>34.67%</td>
<td>65.33%</td>
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</table>
## Content

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Learning time</th>
<th>Description</th>
</tr>
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</table>
### 5. Moving Target Detection

**Learning time:** 23h  
- Theory classes: 6h  
- Practical classes: 2h  
- Self study: 15h

**Description:**  

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### Planning of activities

| Exercises | **Hours:** 26h  
            | Theory classes: 26h |
|-----------|-------------------|
| **Description:** | Collection of problems (with solutions) |

| Control based on problem solutions | **Hours:** 1h 30m  
                                    | Theory classes: 1h 30m |
|-----------------------------------|-------------------|
| **Description:** | Short mid-term test at the end of Chap.2 |

| Extended answer test (Final examination) | **Hours:** 2h 30m  
                                           | Theory classes: 2h 30m |
|------------------------------------------|-------------------|
| **Description:** | Final Exam. Based on problems solution. |

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### Qualification system

- Final examination: 60%  
- Partial (Control) examination: 40%
Bibliography

Basic:


Complementary:
