230107 - EA - Automobile Electronics

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering
Teaching unit: 739 - TSC - Department of Signal Theory and Communications
710 - EEL - Department of Electronic Engineering

Academic year: 2018

Degree:
BACHELOR'S DEGREE IN TELECOMMUNICATIONS SCIENCE AND TECHNOLOGY (Syllabus 2010). (Teaching unit Optional)
BACHELOR'S DEGREE IN ELECTRONIC SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN AUDIOVISUAL SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Teaching unit Optional)

ECTS credits: 6
Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: Silva Martinez, Fernando
Others: Silva Martinez, Fernando
Ramos Castro, Juan Jose

Prior skills

Electronic components, circuits and systems. Electronic Instrumentation.

Learning objectives of the subject

Analyze the electronic systems that incorporate current cars, study their particular requirements and meet new applications currently being developed for future cars.
The course is developed with the advice of several companies in the automotive industry, who taught some theoretical contents.

Study load

| Total learning time: 150h | Hours large group: 26h | 17.33% |
| Hours small group: 26h | 17.33% |
| Self study: 98h | 65.33% |
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## Content

| Introduction | **Learning time:** 12h  
<table>
<thead>
<tr>
<th></th>
<th>Theory classes: 12h</th>
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Introduction to the automotive electronics including the bus CAN</td>
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| Automotive project | **Learning time:** 28h  
<table>
<thead>
<tr>
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<th>Theory classes: 28h</th>
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Definition, development and presentation of an automotive electronics hardware and software project</td>
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| Electronic automotive systems | **Learning time:** 12h  
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| **Description:** | Automotive electronic development management  
|                   | Automotive Electromagnetic Compatibility  
|                   | Hybrid and electrical vehicles  
|                   | Fleet management  
|                   | ADAS systems  
|                   | Drive by Wire |

## Qualification system

Lessons 3 credits  
- Work (content and presentation): 20%  
- Final exam (test): 30%  

Project 3 credits  
- Laboratory work: 30%  
- Final exam (issue): 20%
Bibliography

Basic:


Complementary:


Others resources:

Internet information