Course guide
330450 - SCE - Embedded Control Systems

Unit in charge: Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering.

Degree: BACHELOR'S DEGREE IN AUTOMOTIVE ENGINEERING (Syllabus 2017). (Optional subject).

Academic year: 2023 ECTS Credits: 6.0 Languages: Catalan

LECTURER

Coordinating lecturer: Vicente Rodrigo, Jesús

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. The ability to specify, analyze, design, evaluate, and document microcomputer-based systems, as well as their implementation alternatives in order to form a built-in control system.
2. The ability to use microcomputer tools and programming languages.
3. The knowledge and ability to use existing tools and instrumentation for the analysis, design, development and verification of electronic, computer and communications systems.

Transversal:
7. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.
6. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.
5. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Hours small group</td>
<td>15,0</td>
<td>10.00</td>
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<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>45,0</td>
<td>30.00</td>
</tr>
</tbody>
</table>

Total learning time: 150 h
## CONTENTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Full-or-part-time</th>
<th>Theory classes</th>
<th>Practical classes</th>
<th>Self study</th>
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<tbody>
<tr>
<td>title english</td>
<td>content english</td>
<td>6h</td>
<td>3h</td>
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<td>8h</td>
<td>2h</td>
<td>15h</td>
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## ACTIVITIES

1. **CLASSE EXPOSITORA I DE PROBLEMES (ENG)**

   - Full-or-part-time: 41h
   - Theory classes: 41h
2. CLASSE DE LABORATORI (ENG)

Full-or-part-time: 45h
Laboratory classes: 15h
Self study: 30h

3. TREBALL PERSONAL INDIVIDUAL/EN GRUP (ENG)

Full-or-part-time: 30h
Self study: 30h

4. PROVES (ENG)

Full-or-part-time: 34h
Theory classes: 4h
Self study: 30h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:
- Manuals de referència i Notes d'aplicació del fabricant (en anglès).