330110 - MI - Microcomputers

Coordinating unit: 330 - EPSEM - Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering
Academic year: 2018
Degree: BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
ECTS credits: 6
Teaching languages: Catalan

Teaching staff

Coordinator: JESUS VICENTE RODRIGO

Degree competences to which the subject contributes

Specific:
1. (ENG) La capacitat d’especificar, analitzar, dissenyar, avaluar i documentar sistemes basats en microcomputadors, així com les seves alternatives d’implementació.
2. (ENG) La capacitat d’emprar les eines i els llenguatges de programació dels microcomputadors.
3. (ENG) El coneixement i la capacitat d’emprar les eines i la instrumentació existents per a l’anàlisi, el disseny, el desenvolupament i la verificació de sistemes electrònics, informàtics i de comunicacions.

Transversal:
4. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.
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.
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.
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.

Learning objectives of the subject

Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 45h</th>
<th>30.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours medium group:</td>
<td>0h</td>
</tr>
<tr>
<td></td>
<td>Hours small group:</td>
<td>15h</td>
</tr>
<tr>
<td></td>
<td>Guided activities:</td>
<td>0h</td>
</tr>
<tr>
<td></td>
<td>Self study:</td>
<td>90h</td>
</tr>
</tbody>
</table>
### Content

<table>
<thead>
<tr>
<th>(ENG) 1. INTRODUCCIÓ</th>
<th>Learning time: 6h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 3h</td>
</tr>
<tr>
<td></td>
<td>Self study : 3h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(ENG) 2. ARQUITECTURA D'UN MICROCOMPUTADOR</th>
<th>Learning time: 35h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 12h</td>
</tr>
<tr>
<td></td>
<td>Practical classes: 1h</td>
</tr>
<tr>
<td></td>
<td>Self study : 22h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(ENG) 3. PROGRAMACIÓ D'UN MICROCOMPUTADOR</th>
<th>Learning time: 84h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 22h</td>
</tr>
<tr>
<td></td>
<td>Practical classes: 12h</td>
</tr>
<tr>
<td></td>
<td>Self study : 50h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(ENG) 4. MEMÒRIES</th>
<th>Learning time: 25h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 8h</td>
</tr>
<tr>
<td></td>
<td>Practical classes: 2h</td>
</tr>
<tr>
<td></td>
<td>Self study : 15h</td>
</tr>
</tbody>
</table>
# Planning of activities

<table>
<thead>
<tr>
<th>(ENG) 1. CLASSE EXPOSITIVA I DE PROBLEMES</th>
<th>Hours: 41h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 41h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(ENG) 2. CLASSE DE LABORATORI</th>
<th>Hours: 45h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Laboratory classes: 15h</td>
</tr>
<tr>
<td></td>
<td>Self study: 30h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(ENG) 3. TREBALL PERSONAL INDIVIDUAL/ EN GRUP</th>
<th>Hours: 30h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self study: 30h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(ENG) 4. PROVES</th>
<th>Hours: 34h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 4h</td>
</tr>
<tr>
<td></td>
<td>Self study: 30h</td>
</tr>
</tbody>
</table>

## Bibliography

**Basic:**

- Manuals de referència.
- Notes d'aplicació del fabricant.