Course guides
330110 - MI - Microcomputers

Unit in charge: Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering.
Degree: BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Compulsory subject).

Academic year: 2021  ECTS Credits: 6.0  Languages: Catalan

LECTURER
Coordinating lecturer: JESUS VICENTE RODRIGO
Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUITE

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:
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.

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

Total learning time: 150 h
## CONTENTS

### (ENG) 1. INTRODUCCIÓ

- **Full-or-part-time:** 6h  
  - Theory classes: 3h  
  - Self study: 3h

### (ENG) 2. ARQUITECTURA D'UN MICROCOMPUTADOR

- **Full-or-part-time:** 35h  
  - Theory classes: 12h  
  - Practical classes: 1h  
  - Self study: 22h

### (ENG) 3. PROGRAMACIÓ D'UN MICROCOMPUTADOR

- **Full-or-part-time:** 84h  
  - Theory classes: 22h  
  - Practical classes: 12h  
  - Self study: 50h

### (ENG) 4. MEMÒRIES

- **Full-or-part-time:** 25h  
  - Theory classes: 8h  
  - Practical classes: 2h  
  - Self study: 15h

## ACTIVITIES

### (ENG) 1. CLASSE EXPOSITIVA I DE PROBLEMES

- **Full-or-part-time:** 41h  
  - Theory classes: 41h

### (ENG) 2. CLASSE DE LABORATORI

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

### (ENG) 3. TREBALL PERSONAL INDIVIDUAL/EN GRUP

- **Full-or-part-time:** 30h  
  - Self study: 30h
**ENG 4. PROVES**

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

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**GRADING SYSTEM**

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**BIBLIOGRAPHY**

**Basic:**  
- Manuals de referència.  
- Notes d'aplicació del fabricant.