Course guide
240IEL31 - 240IEL31 - Electric Energy Conversion

Unit in charge: Barcelona School of Industrial Engineering
Teaching unit: 709 - DEE - Department of Electrical Engineering.
Degree: MASTER'S DEGREE IN INDUSTRIAL ENGINEERING (Syllabus 2014). (Optional subject).
Academic year: 2023 ECTS Credits: 4.5 Languages: Catalan

LECTURER

Coordinating lecturer: DANIEL MONTESINOS MIRACLE
Others: Primer quadrimestre: DANIEL MONTESINOS MIRACLE - 10

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CEELECT1. Design electronic systems (mixed analogical and digital systems and micro-mechanical systems on silicon, digital systems based on discrete components, logical programable devices and/or microprocessors, electronic instrumentation systems and power electronic systems) and manage development projects and/or commercialization of electronic systems or development projects and/or commercialization of systems in which the electronic subsystems have an important specific weight.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

Al finalitzar l'assignatura, l'estudiant ha de ser capaç de:
*Entendre el funcionament d'un convertidor estàtic de potencia.
*Dimensionar i seleccionar els elements principals d'un convertidor estàtic de potencia

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours large group</td>
<td>27,0</td>
<td>24.00</td>
</tr>
<tr>
<td>Hours small group</td>
<td>13,5</td>
<td>12.00</td>
</tr>
<tr>
<td>Self study</td>
<td>72,0</td>
<td>64.00</td>
</tr>
</tbody>
</table>

Total learning time: 112.5 h
CONTENTS

<table>
<thead>
<tr>
<th>Title English</th>
<th>Description:</th>
<th>Content English</th>
</tr>
</thead>
</table>

**Related competencies:**
CEEELECT1. Design electronic systems (mixed analogical and digital systems and micro-mechanical systems on silicon, digital systems based on discrete components, logical programable devices and/or microprocessors, electronic instrumentation systems and power electronic systems) and manage development projects and/or commercialization of electronic systems or development projects and/or commercialization of systems in which the electronic subsystems have an important specific weight.

**Full-or-part-time:** 39h
Theory classes: 39h

<table>
<thead>
<tr>
<th>Title English</th>
<th>Description:</th>
<th>Content English</th>
</tr>
</thead>
</table>

**Full-or-part-time:** 7h
Theory classes: 7h

<table>
<thead>
<tr>
<th>Title English</th>
<th>Description:</th>
<th>Content English</th>
</tr>
</thead>
</table>

**Full-or-part-time:** 7h
Theory classes: 7h

---

**GRADING SYSTEM**

**BIBLIOGRAPHY**

**Basic:**