220601 - Modelling and Control of Electrical Machines

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 709 - EE - Department of Electrical Engineering
Academic year: 2018
Degree: MASTER'S DEGREE IN AUTOMATIC SYSTEMS AND INDUSTRIAL ELECTRONICS (Syllabus 2012). (Teaching unit Compulsory)
ECTS credits: 5  Teaching languages: Catalan, Spanish, English

Teaching staff
Coordinator: Joan Montañá Puig
Others: Joan Montañá Puig

Degree competences to which the subject contributes

Specific:
1. Modeling and simulation of electric machines electromecanic behavior.

Teaching methodology

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Learning objectives of the subject

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Study load

<table>
<thead>
<tr>
<th>Total learning time: 125h</th>
<th>Hours large group: 31h</th>
<th>24.80%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours small group:</td>
<td>14h</td>
</tr>
<tr>
<td></td>
<td>Self study:</td>
<td>80h</td>
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</table>
# Content

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
<th>Learning Time</th>
<th>Theory Classes</th>
<th>Laboratory Classes</th>
<th>Self Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introducció</td>
<td>1h</td>
<td>1h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Modelat i regulació de les màquines elèctriques en règim permanent</td>
<td>13h</td>
<td>3h</td>
<td>10h</td>
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<tr>
<td>3</td>
<td>Modelat, control i regulació de la màquina de corrent continua</td>
<td>28h</td>
<td>6h</td>
<td>4h</td>
<td>18h</td>
</tr>
<tr>
<td>4</td>
<td>Modelat de sistemes electromecànics</td>
<td>18h</td>
<td>4h</td>
<td>2h</td>
<td>12h</td>
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<tr>
<td>5</td>
<td>Modelat i control de la màquina asàncrona</td>
<td>33h</td>
<td>9h</td>
<td>4h</td>
<td>20h</td>
</tr>
<tr>
<td>6</td>
<td>Modelat i control de les màquines d'execució especial</td>
<td>32h</td>
<td>8h</td>
<td>4h</td>
<td>20h</td>
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</tbody>
</table>
### Planning of activities

| (ENG) ACTIVITAT 1. CLASSES DE TEORIA | Hours: 50h  
Theory classes: 28h  
Self study: 22h |
|--------------------------------------|------------------|
| (ENG) ACTIVITAT 2. PRÀCTIQUES DE LABORATORI | Hours: 28h  
Laboratory classes: 14h  
Self study: 14h |
| (ENG) ACTIVITAT 3. EXERCICIS I PETITS PROJECTES | Hours: 32h  
Self study: 32h  
Theory classes: 0h |
| (ENG) ACTIVITAT 4. PROVA 1 | Hours: 5h  
Theory classes: 1h  
Self study: 4h |
| (ENG) ACTIVITAT 5. PROVA 2 | Hours: 10h  
Theory classes: 2h  
Self study: 8h |

### Qualification system

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### Regulations for carrying out activities

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Bibliography

Basic:


Complementary:


Others resources: