220252 - 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 INDUSTRIAL ENGINEERING (Syllabus 2013). (Teaching unit Optional)
ECTS credits: 5
Teaching languages: Catalan, Spanish, English

Teaching staff
Coordinator: Antoni Garcia Espinosa
Others: Jaume Saura Perisé

Degree competences to which the subject contributes
Specific:
1. Capability for modeling, analysis, calculation and design of electrical power systems.
3. Ability to project conventional and non-conventional power facilities.
6. Ability to model and solve problems associated with the operation of electric power systems by integrating information technologies and communication: protection, network operation, and electricity market stability.

Teaching methodology
Lectures and laboratori sessions

Learning objectives of the subject
To study the vector control schemes as well as Direct Torque Control schemes

Study load

<table>
<thead>
<tr>
<th>Study load</th>
<th>Hours large group</th>
<th>Hours small group</th>
<th>Self study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total learning time: 125h</td>
<td>30h</td>
<td>15h</td>
<td>80h</td>
</tr>
<tr>
<td>Hours large group:</td>
<td>24.00%</td>
<td>12.00%</td>
<td>64.00%</td>
</tr>
<tr>
<td>Hours small group:</td>
<td></td>
<td></td>
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<tr>
<td>Self study:</td>
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Content
Vector control of Induction Motor and Permanent Magnet Synchronous Machines.

Learning time: 125h
Theory classes: 30h
Laboratory classes: 15h
Self study: 80h

Universitat Politècnica de Catalunya
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Qualification system

First exam * 0.3 + Final exam * 0.5 + laboratori * 0.2

Regulations for carrying out activities

In case to fail the first exam, the obtained mark could be improved

Bibliography

Basic: