Course guide
340110 - ACEL-E6009 - Electric Drives

Unit in charge: Vilanova i la Geltrú School of Engineering
Teaching unit: 709 - DEE - Department of Electrical Engineering.
Degree: BACHELOR’S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Compulsory subject).
BACHELOR’S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR’S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Optional subject).

Academic year: 2022    ECTS Credits: 6.0    Languages: Catalan

LECTURER
Coordinating lecturer: Pere Andrada Gascón
Others: Marcel Torrent Burgués

PRIOR SKILLS
It is recommended to have attended Electric Machines I and Electric Machines II

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES
Specific:
4. CE34. Ability to design electric systems and systems of traction in vehicles.

Transversal:
2. SUSTAINABILITY AND SOCIAL COMMITMENT - Level 3. Taking social, economic and environmental factors into account in the application of solutions. Undertaking projects that tie in with human development and sustainability.
3. 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>
</tr>
</thead>
<tbody>
<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>
<tr>
<td>Hours large group</td>
<td>45,0</td>
<td>30.00</td>
</tr>
</tbody>
</table>

Total learning time: 150 h
CONTENTS

(ENG) Topic 1. Fundamentals of electric drives
Description:
(in process)

Full-or-part-time: 20h
Theory classes: 4h
Practical classes: 2h
Laboratory classes: 4h
Self study: 10h

(ENG) Topic 2. Direct current motor drives
Description:
(in process)

Full-or-part-time: 39h
Theory classes: 8h
Practical classes: 2h
Laboratory classes: 4h
Self study: 25h

(ENG) Topic 3. Space vector model of A.C. drives
Description:
(in process)

Full-or-part-time: 16h
Theory classes: 4h
Practical classes: 2h
Self study: 10h

(ENG) Topic 4. Asynchronous motor drives
Description:
(in process)

Full-or-part-time: 43h
Theory classes: 6h
Practical classes: 4h
Laboratory classes: 4h
Guided activities: 4h
Self study: 25h
(ENG) Topic 5.- Synchronous motor drives

Description:
(in process)

Full-or-part-time: 23h
Theory classes: 4h
Practical classes: 2h
Laboratory classes: 2h
Self study : 15h

GRADING SYSTEM

BIBLIOGRAPHY

Basic: