Course guide
240264 - 240AU120 - Electrical Motors

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).
MASTER'S DEGREE IN AUTOMOTIVE ENGINEERING (Syllabus 2019). (Optional subject).

Academic year: 2022  ECTS Credits: 6.0  Languages: Catalan

LECTURER

Coordinating lecturer: Joan Rull Duran
Others: Rull Duran, Joan

TEACHING METHODOLOGY

Teaching methodology consists of:
- Explanatory classes
- Problem classes
- One homework with written report delivery

LEARNING OBJECTIVES OF THE SUBJECT

At the end of the subject, have to be able to:
- Formulate and calculate electromagnetic circuits.
- Describe, identify and recognize electric machines.
- Describe, identify and recognize power electronics converters to drive electric machines.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study</td>
<td>72,0</td>
<td>57.14</td>
</tr>
<tr>
<td>Hours large group</td>
<td>54,0</td>
<td>42.86</td>
</tr>
</tbody>
</table>

Total learning time: 126 h

CONTENTS

(ENG) Tema 1: Materials elèctrics i magnètics. Circuits electromagnètics.

Description:
Materials elèctrics i magnètics. Circuits electromagnètics.

Full-or-part-time: 12h
Theory classes: 12h
(ENG) Tema 2: Màquina de corrent continu.

Description:
Màquina de corrent continu.

Full-or-part-time: 12h
Theory classes: 12h

(ENG) Tema 3: Màquina síncrona.

Description:
Màquina síncrona.

Full-or-part-time: 12h
Theory classes: 12h

(ENG) Tema 4: Màquina d'inducció.

Description:
Màquina d'inducció.

Full-or-part-time: 12h
Theory classes: 12h

(ENG) Tema 6: Convertidors estàtics per a màquines elèctriques.

Description:
Convertidors estàtics per a màquines elèctriques.

Full-or-part-time: 12h
Theory classes: 12h

GRADING SYSTEM

For ordinary assessment:
Final grade = 0.2 * Job grade + 0.8 * Theory assessment grade
Theory assessment mark = 0.3 * partial exam mark + 0.7 * final exam mark
For reassessment:
Final note = Min (Reav1, Reav2)
On:
Min means "minimum value of"
Reav1 = 5.0
Reav2 = Final re-assessment exam grade

EXAMINATION RULES.

A sheet of paper (collection of formulae) written on only one side, calculator and ballpoint pen are allowed in partial exams.
A sheet of paper (collection of formulae) written on both sides, calculator and ballpoint pen are allowed in final exams.