

29629 - Electric motor drives

Información del Plan Docente

Academic Year	2018/19
Subject	29629 - Electric motor drives
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	430 - Bachelor's Degree in Electrical Engineering
ECTS	6.0
Year	3
Semester	Second semester
Subject Type	Compulsory
Module	---

1.General information

1.1.Aims of the course

The main goal of the course is that the student is able to select and control the most suitable electric drive for an specific industrial application. Both the classic and the latest control techniques are studied; Emphasizing, above all, the practical aspects

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

Evaluation:

1) Exam (70%)

2) Lab test (10%)

3) Other activities (20%)**4. Methodology, learning tasks, syllabus and resources****4.1. Methodological overview****4.2. Learning tasks****4.3. Syllabus**

1. General aspects of industrial drives
 - 1.1. Optimal selection
 - 1.2. Overview on power electronics devices used in industrial drives
2. Industrial drives for DC machines
 - 2.1. AC/DC converter
 - 2.2. DC/DC converter
 - 2.3. DC brushless drives
3. Industrial drives for AC induction machines with squirrel cage
 - 3.1. Soft starter
 - 3.2. AC/DC/AC converters with DC link
 - 3.3. AC/AC converters
 - 3.4. Vector Control
4. Industrial drives for AC induction machines with double fed

4.4. Course planning and calendar**4.5. Bibliography and recommended resources**