

## 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: 2019  
 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-conventionals 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 laborator sessions

### Learning objectives of the subject

To study the vector control schemes as well as Direct Torque Control schemes

### Study load

Total learning time: 125h	Hours large group:	30h	24.00%
	Hours small group:	15h	12.00%
	Self study:	80h	64.00%

### Content

Vector control of Induction Motor and Permanent Magnet Synchronous Machines.	Learning time: 125h Theory classes: 30h Laboratory classes: 15h Self study : 80h
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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:

Mohan, Ned. Advanced electric drives: analysis, control and modeling using simulink. Minneapolis: MNPETE, cop. 2001. ISBN 0971529205.