

## 820246 - LEIEIA - Industrial Electronics Laboratory

Coordinating unit: 295 - EEBE - Barcelona East School of Engineering

Teaching unit: 710 - EEL - Department of Electronic Engineering

Academic year: 2015

Degree: BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)  
BACHELOR'S DEGREE IN ENERGY ENGINEERING (Syllabus 2009). (Teaching unit Optional)  
BACHELOR'S DEGREE IN ENERGY ENGINEERING (Syllabus 2009). (Teaching unit Optional)  
BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)  
BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional)  
BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional)

ECTS credits: 6 Teaching languages: Spanish

### Teaching staff

Coordinator: MANUEL ROMÁN LUMBRERAS

Others: MANUEL ROMÁN LUMBRERAS

### Degree competences to which the subject contributes

Transversal:

1. 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.

### Learning objectives of the subject

### Study load

Total learning time: 150h	Hours large group:	45h	30.00%
	Hours medium group:	0h	0.00%
	Hours small group:	15h	10.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

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### Content

(ENG) Tema 1: Definición de las especificaciones del proyecto de CEEE	Learning time: 7h 30m Theory classes: 3h Self study : 4h 30m
(ENG) Tema 2: Sistema de potencia.	Learning time: 25h Theory classes: 10h Self study : 15h
(ENG) Tema 3: Cálculo y construcción de los componentes magnéticos	Learning time: 32h 30m Theory classes: 8h Laboratory classes: 5h Self study : 19h 30m
(ENG) Tema 4: Sistema de control	Learning time: 30h Theory classes: 8h Laboratory classes: 4h Self study : 18h
(ENG) Tema 5: Implementación física del proyecto	Learning time: 40h Theory classes: 12h Laboratory classes: 4h Self study : 24h
(ENG) Tema 6: Ensayos	Learning time: 15h Theory classes: 4h Laboratory classes: 2h Self study : 9h

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### Bibliography

#### Basic:

Mohan, N.; Undeland, T. M.; Robbins, W. P. Power electronics : converters, applications, and design. 3rd ed. New York [etc.]: John Wiley & Sons, cop. 2003. ISBN 0471226939.

#### Complementary:

Erickson, R. W.; Maksimovic, D. Fundamentals of power electronics [on line]. 2nd ed. Dordrecht: Kluwer Academic Publishers, cop. 2001 [Consultation: 05/03/2012]. Available on: <<http://link.springer.com/book/10.1007/b100747/page/1>>. ISBN 0792372700.

#### Others resources: