

820245 - EICEE - Industrial Electronics for Energy Static Converters

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: Catalan, Spanish

Teaching staff

Coordinator: Alfonso Conesa Roca

Degree competences to which the subject contributes

Specific:

1. Summarise information and undertake self-directed learning activities.

Transversal:

2. 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) 1. Introducció.	<p>Learning time: 29h</p> <p>Theory classes: 9h Laboratory classes: 2h Self study : 18h</p>
(ENG) 2. Convertidores de DC-DC.	<p>Learning time: 31h</p> <p>Theory classes: 9h Laboratory classes: 4h Self study : 18h</p>
(ENG) 3. Convertidores de DC-AC.	<p>Learning time: 31h</p> <p>Theory classes: 9h Laboratory classes: 4h Self study : 18h</p>
(ENG) 4. Convertidores de AC-DC.	<p>Learning time: 27h</p> <p>Theory classes: 9h Self study : 18h</p>
(ENG) 5. Convertidores de AC-AC.	<p>Learning time: 10h</p> <p>Theory classes: 4h Self study : 6h</p>
(ENG) 6. Convertidores resonantes.	<p>Learning time: 22h</p> <p>Theory classes: 6h Laboratory classes: 4h Self study : 12h</p>

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Bibliography

Basic:

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

Trzynadlowski, Andrzej M. Introduction to modern power electronics. New York [etc.]: Prentice-Hall, 1998. ISBN 0471153036.

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

Others resources: