

820244 - AEP - Power Electronics Applications

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. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.

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) -Àreas de aplicación de la Electrónica de Potencia	Learning time: 6h Theory classes: 2h Self study : 4h
(ENG) -Estabilizadores/reguladores de tensión y acondicionadores de red eléctrica	Learning time: 15h Theory classes: 4h Laboratory classes: 3h Self study : 8h
(ENG) -Sistemas de alimentación ininterrumpida (S.A.I.)	Learning time: 15h Theory classes: 4h Laboratory classes: 3h Self study : 8h
(ENG) -Fuentes de alimentación	Learning time: 15h Theory classes: 4h Laboratory classes: 3h Self study : 8h
(ENG) -La potencia en los sistemas eléctricos	Learning time: 12h Theory classes: 4h Self study : 8h
(ENG) -Compensación estática de energía reactiva y armónicos	Learning time: 24h Theory classes: 8h Self study : 16h

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(ENG) -Control de máquinas eléctricas	Learning time: 51h Theory classes: 15h Laboratory classes: 6h Self study : 30h
(ENG) -Otras aplicaciones de la electrónica de potencia	Learning time: 12h Theory classes: 4h Self study : 8h

Bibliography

Basic:

Mohan, Ned; Undeland, Tore M.; Robbins, William P. Power electronics : converters, applications, and design. 2nd ed. New York [etc.]: Wiley, 1995. ISBN 0471305766.

Complementary:

Bose, Bimal K. Power electronics and motor drives : recent advances and trends. Oxford: Academic, 2006. ISBN 0120884054.

Others resources: