Last update: 02-06-2015

820054 - TSECR - Electronics System Technology for Control

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 INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN BIOMEDICAL 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 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 BIOMEDICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)

ECTS credits: 6 Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: FRANCISCO JOSÉ CASELLAS BENEYTO

Degree competences to which the subject contributes

Specific:

1. Understand automatic regulation and control techniques and their application to industrial automation.

Transversal:

2. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.
3. TEAMWORK - Level 2. Contributing to the consolidation of a team by planning targets and working efficiently to favor communication, task assignment and cohesion.

Learning objectives of the subject

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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%

Content

(ENG) Introducción a la tecnología de los sistemas electrónicos de control y regulación.

Degree competences to which the content contributes:

(ENG) 1: Sistemas de adquisición de variables físicas para el control electrónico de sistemas.

Degree competences to which the content contributes:

(ENG) 2: Procesos y estrategias de control en lenguaje de programación gráfico.

Degree competences to which the content contributes:

(ENG) 3: Acciones de control mediante sistemas actuadores.

Degree competences to which the content contributes:

(ENG) 4: Sistemas de gestión tipo SCADA.

Degree competences to which the content contributes:

(ENG) 5: Estudio de ejemplos industriales de sistemas de control.

Degree competences to which the content contributes:

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Bibliography

Basic:

Angulo Bahón, Cecilio; Raya Giner, Cristóbal. Tecnología de sistemas de control [on line]. Barcelona: Edicions UPC, 2004Available on: <http://hdl.handle.net/2099.3/36817>. ISBN 8483017784.

Complementary:

Lajara Vizcaíno, José Rafael; Pelegrí Sebastiá, José. Labview : entorno grafico de programación. Barcelona: Marcombo, cop. 2007. ISBN 9788426714268.

Ponce-Cruz, Pedro; Ramírez-Figueroa, Fernando D. Intelligent control systems with LabVIEW¿. London: Springer, 2010. ISBN 9781848826830.