Last update: 02-06-2015

820066 - MSSD - Modelling and Simulation of Dynamical Systems

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

Teaching unit: 707 - ESAII - Department of Automatic Control

Academic year: 2015

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

ECTS credits: 6 Teaching languages: Catalan

Teaching staff

Coordinator: Antoni Grau Saldes

Others: Montserrat Vallverdu

Degree competences to which the subject contributes

Specific:

1. Analyse, design, simulate and optimise processes and products.

2. Design, manage and run simulation, control and instrumentation procedures in chemical processes.

3. Model and simulate systems.

Transversal:

4. SUSTAINABILITY AND SOCIAL COMMITMENT - Level 3. Taking social, economic and environmental factors into account in the application of solutions. Undertaking projects that tie in with human development and sustainability.
5. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.

Teaching methodology

M

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) -	Learning time: 12h Theory classes: 6h Laboratory classes: 0h Self study : 6h
(ENG) Tema 2. Modelització de Sistemes multitecnologia	Learning time: 35h Theory classes: 10h Laboratory classes: 4h Self study : 21h
(ENG) Tema 3. Simulació de sistemes continus.	Learning time: 35h Theory classes: 10h Laboratory classes: 4h Self study : 21h
(ENG) Tema 4. Mètodes numèrics d'integració	Learning time: 35h Theory classes: 10h Laboratory classes: 4h Self study : 21h
(ENG) Tema 5. Identificació de Sistemes	Learning time: 33h Theory classes: 9h Laboratory classes: 3h Self study : 21h

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Qualification system

S

Bibliography