Course guides
220255 - 220255 - Control, Management and Monitoring of Processes

Last modified: 29/05/2020

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 707 - ESAII - Department of Automatic Control.

Degree: MASTER'S DEGREE IN INDUSTRIAL ENGINEERING (Syllabus 2013). (Optional subject).

Academic year: 2020 **ECTS Credits:** 2.5 **Languages:** Spanish

LECTURER

Coordinating lecturer: Joseba Jokin Quevedo Casin

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. Capability for modeling, analysis, calculation and design of electrical power systems.
2. Ability to calculate and design electrical machines and actuators, with knowledge of efficient electrical systems and efficient control of electrical drives.
3. Ability to project conventional and non-conventionals power facilities.
4. Knowledge to data integration and industrial communications.
5. Knowledge to the management and monitoring of automated information processes energy.
6. Ability to model and solve problems associated with the operation of electric power systems by integrating information technologies and communication: protection, network operation, and electricity market stability.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Hours small group	7,5	12.00
Self study	40,0	64.00
Hours large group	15,0	24.00

Total learning time: 62.5 h

CONTENTS

(ENG) - MODULO 1:Los PLC y PACs en el Control Industrial.

Description:
(ENG) Control de processos Industrials mitjançant PLC/PAC
Targetes conversores AD y DA
Estudi del bloc de funció i targetes especifiques de PID
Introducció a les sistemes SCADA
Factores ergonòmics a tindrà en conta en el disseny de interfícies gràfiques

Full-or-part-time: 31h 30m
Theory classes: 7h 30m
Laboratory classes: 4h
Self study : 20h

(ENG) - MODULO 2:Estructures de Control de Processos.

Description:
(ENG) Control multivariable, sistemes acoblats y desacoblats.
Estructures de Control: Control Cascada, Control Ratio, Control Selectiu, Control Override, Control Rango Partido

Full-or-part-time: 31h
Theory classes: 7h 30m
Practical classes: 3h 30m
Self study : 20h

GRADING SYSTEM