

220255 - Control, Management and Monitoring of Processes

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
 Teaching unit: 707 - ESAII - Department of Automatic Control
 Academic year: 2019
 Degree: MASTER'S DEGREE IN INDUSTRIAL ENGINEERING (Syllabus 2013). (Teaching unit Optional)
 ECTS credits: 2,5 Teaching languages: Spanish

Teaching staff

Coordinator: Joseba Jokin Quevedo Casin

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.

Learning objectives of the subject

Study load

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|------------------------------|--------------------|--------|--------|
| Total learning time: 62h 30m | Hours large group: | 15h | 24.00% |
| | Hours small group: | 7h 30m | 12.00% |
| | Self study: | 40h | 64.00% |

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Content

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| <p>(ENG) - MODULO 1: Los PLC y PACs en el Control Industrial.</p> | <p>Learning time: 31h 30m Theory classes: 7h 30m Laboratory classes: 4h Self study : 20h</p> |
| <p>Description: (ENG) Control de processos Industrials mitjançant PLC/PAC Targetes conversores AD y DA Estudi del bloc de funció i targetes específiques de PID Introducció a les sistemes SCADA Factores ergonòmics a tindrà en conta en el disseny de interfícies gràfiques</p> | |
| <p>(ENG) - MODULO 2: Estructures de Control de Processos.</p> | <p>Learning time: 31h Theory classes: 7h 30m Practical classes: 3h 30m Self study : 20h</p> |
| <p>Description: (ENG) Control multivariable, sistemes acoblats y desacoblats. Estructures de Control: Control Cascada, Control Ratio, Control Selectiu, Control Override, Control Rango Partido</p> | |

Bibliography