Course guide
340245 - SIIN-K7P10 - Instrumentation Systems

Last modified: 03/04/2024

Unit in charge: Vilanova i la Geltrú School of Engineering
Teaching unit: 710 - EEL - Department of Electronic Engineering.

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

Academic year: 2024 **ECTS Credits:** 6.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: JOAQUIN DEL RIO FERNANDEZ

Others: JOAQUIN DEL RIO FERNANDEZ

PRIOR SKILLS

It is recommended to have previously taken the Electronic Instrumentation course, although it is not essential.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. CE23.Applied knowledge of electronical instrumentation.
2. CE24. Ability to design electronical, analog, digital and power systems.
3. CE28. Applied knowledge of industrial and communication computing.
4. CE29. Ability to design automotion control systems.
5. CE3. Fundamental knowledge of use and programming of computer, operating systems, data base and informatic programs with application in engineering.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Hours small group	30,0	20.00
Hours large group	30,0	20.00
Self study	90,0	60.00

Total learning time: 150 h

CONTENTS

(ENG) TEMA 1. Introducció al control d'instrumentació

(ENG) TEMA 2. Aplicació dels Processadors Digitals de Senyal a la instrumentació

(ENG) TEMA 3. Interfícies de comunicació. - Sèrie: Assíncron, Síncron. - Paral.lel.

(ENG) TEMA 4. Sistemes d'Adquisició de dades

(ENG) -Dessenvolupament d'aplicacions amb LabVIEW de Control d'instrumentació i Adquisició de Dades

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Biel Solé, Domingo; Olivé, Joaquim; Prat, Jordi; Sánchez Robert, Francesc; Manuel Lázaro, Antonio. Instrumentación virtual : adquisición, procesado y análisis de señales [on line]. Barcelona: Edicions UPC, 2001 [Consultation: 24/03/2022]. Available on: https://upcommons.upc.edu/handle/2099.3/36187. ISBN 8483014734.
- Shariat Panahi, Shahram; Río Fernández, Joaquín del; Sarriá Gandul, David; Manuel Lázaro, Antonio. LabVIEW : programación para sistemas de instrumentación. Madrid: Ibergarceta Publicaciones, 2011. ISBN 9788492812684.
- Riu Costa, Pere Joan; Rosell Ferrer, Javier; Ramos Castro, Juan. Sistemas de instrumentación [on line]. Barcelona: Edicions UPC, 1995 [Consultation: 28/04/2022]. Available on: https://upcommons.upc.edu/handle/2099.3/36384. ISBN 8476535791.