

## 340245 - SIIN-K7P10 - Instrumentation Systems

Coordinating unit:	340 - EPSEVG - Vilanova i la Geltrú School of Engineering
Teaching unit:	710 - EEL - Department of Electronic Engineering
Academic year:	2019
Degree:	BACHELOR'S DEGREE IN ELECTRONIC SYSTEMS ENGINEERING (Syllabus 2010). (Teaching unit Optional) BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
ECTS credits:	6
Teaching languages:	Catalan, Spanish

### Teaching staff

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

### Learning objectives of the subject

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### Study load

Total learning time: 150h	Hours large group:	30h	20.00%
	Hours medium group:	0h	0.00%
	Hours small group:	30h	20.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

### Content

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

Degree competences to which the content contributes:

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

Degree competences to which the content contributes:

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

Degree competences to which the content contributes:

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

Degree competences to which the content contributes:

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

Degree competences to which the content contributes:

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### 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: 24/09/2015]. Available on: <<http://hdl.handle.net/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: 17/10/2019]. Available on: <[https://discovery.upc.edu/iii/encore/record/C\\_\\_Rb1228866?lang=cat](https://discovery.upc.edu/iii/encore/record/C__Rb1228866?lang=cat)>. ISBN 848301095X.