



Course guide

820227 - IEEIA - Electronic Instrumentation

Last modified: 08/08/2024

Unit in charge: Barcelona East School of Engineering
Teaching unit: 710 - EEL - Department of Electronic Engineering.

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

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

LECTURER

Coordinating lecturer: FRANCISCO JOSÉ CASELLAS BENEYTO

Others: Primer quadrimestre:
FRANCISCO JOSÉ CASELLAS BENEYTO - Grup: T13, Grup: T14
IGNACIO MORAGUES RODRÍGUEZ - Grup: T12
FRANCESC XAVIER ROSET JUAN - Grup: T11, Grup: T12, Grup: T13, Grup: T14

REQUIREMENTS

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. Understand the applications of electronic instrumentation.

Transversal:

2. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Self study	90,0	60.00
Hours small group	15,0	10.00
Hours large group	45,0	30.00

Total learning time: 150 h



CONTENTS

1. Introduction to the subject of electronic instrumentation.

Description:

- .

Specific objectives:

- .

Related activities:

- .

Full-or-part-time: 1h

Theory classes: 1h

2. Measures and analysis of basic signals.

Description:

- .

Specific objectives:

- .

Related activities:

- .

Full-or-part-time: 9h

Theory classes: 3h

Laboratory classes: 2h

Self study : 4h

3. Basic instruments.

Description:

- .

Specific objectives:

- .

Related activities:

- .

Full-or-part-time: 85h

Theory classes: 21h

Laboratory classes: 8h

Self study : 56h



4. Measurement systems.

Description:

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Specific objectives:

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Related activities:

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Full-or-part-time: 54h

Theory classes: 20h

Laboratory classes: 4h

Self study : 30h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Pallàs Areny, Ramón. Instruments electrònics bàsics. Barcelona: Marcombo, DL 2008. ISBN 9788426714848.
- Pérez García, Miguel Ángel. Instrumentación electrónica. 1ª ed. Madrid: Paraninfo, 2014. ISBN 9788428337021.

Complementary:

- Manuel Lázaro, Antonio [et al.]. Problemas resueltos de instrumentación y medidas electrónicas. Madrid: Paraninfo, 1994. ISBN 8428321418.
- Pallàs Areny, Ramón; Casas, Òscar; Bragós Bardia, Ramon. Sensores y acondicionadores de señal : problemas resueltos. Barcelona: Marcombo, cop. 2008. ISBN 9788426714947.
- Wolf, Stanley; Smith, Richard F. M. Student reference manual for electronic instrumentation laboratories. 2nd ed. Upper Saddle River: Pearson Education, cop. 2004. ISBN 0130421820.
- Pallàs Areny, Ramon. Sensores y acondicionadores de señal. 4a ed. Barcelona [etc.]: Marcombo Boixareu, cop. 2003. ISBN 8426713440.
- Pallàs Areny, Ramon. Adquisición y distribución de señales. [Reimpr.]. Barcelona: Marcombo, DL 2008. ISBN 9788426709189.

RESOURCES

Other resources: