

## Course guide

### 220612 - 220612 - Energy Efficiency Supervision and Control

Last modified: 11/04/2025

**Unit in charge:** Terrassa School of Industrial, Aerospace and Audiovisual Engineering  
**Teaching unit:** 710 - EEL - Department of Electronic Engineering.

**Degree:** MASTER'S DEGREE IN AUTOMATIC SYSTEMS AND INDUSTRIAL ELECTRONICS (Syllabus 2012). (Optional subject).

**Academic year:** 2025    **ECTS Credits:** 5.0    **Languages:** Catalan, Spanish

#### LECTURER

**Coordinating lecturer:** Jordi Zaragoza Bertomeu

**Others:** Néstor Berbel Artal

#### DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

**Specific:**

1. Research, design, development and characterization of electric energy quality. Capacity to diagnose the different equipment that requires electromagnetic compatibility validation.
2. Research, design and development of energy management systems integrated in the electric grid, with its data systems.

**Basic:**

3. Improve self-learning capacity

#### TEACHING METHODOLOGY

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#### LEARNING OBJECTIVES OF THE SUBJECT

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#### STUDY LOAD

Type	Hours	Percentage
Hours small group	14,0	11.20
Self study	80,0	64.00
Hours large group	31,0	24.80

**Total learning time:** 125 h



## CONTENTS

### (ENG) Mòdul 1 Eficiència energètica

**Description:**

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**Full-or-part-time:** 30h

Theory classes: 8h

Laboratory classes: 2h

Self study : 20h

### (ENG) -

**Description:**

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**Full-or-part-time:** 31h

Theory classes: 8h

Laboratory classes: 3h

Self study : 20h

### (ENG) Mòdul 3 Monitorització de xarxa elèctrica

**Description:**

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**Full-or-part-time:** 34h

Theory classes: 7h

Laboratory classes: 7h

Self study : 20h

### (ENG) -

**Description:**

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**Full-or-part-time:** 30h

Theory classes: 8h

Laboratory classes: 2h

Self study : 20h

## ACTIVITIES

### (ENG) ACTIVITAT 1. CLASSES DE TEORIA

**Full-or-part-time:** 56h

Theory classes: 28h

Self study: 28h



#### (ENG) ACTIVITAT 2. CLASSES DE LABORATORI

**Full-or-part-time:** 28h

Laboratory classes: 14h

Self study: 14h

#### (ENG) ACTIVITAT 3. AVALUACIÓ PARCIAL

**Full-or-part-time:** 15h 30m

Theory classes: 1h 30m

Self study: 14h

#### (ENG) ACTIVITAT 4. AVALUACIÓ FINAL

**Full-or-part-time:** 15h 30m

Theory classes: 1h 30m

Self study: 14h

### GRADING SYSTEM

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### EXAMINATION RULES.

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