Course guide
820328 - RSE - Energy Sector Regulation

Unit in charge: Barcelona East School of Engineering
Teaching unit: 709 - DEE - Department of Electrical Engineering.

Degree: BACHELOR’S DEGREE IN ENERGY ENGINEERING (Syllabus 2009). (Compulsory subject).

Academic year: 2022  ECTS Credits: 6.0  Languages: Catalan

LECTURER

Coordinating lecturer: JORDI DE LA HOZ CASAS

Others:
Primer quadrimestre:
JORDI DE LA HOZ CASAS - M11, M12

Segon quadrimestre:
JORDI DE LA HOZ CASAS - T11

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CEENE-16. Formulate energy balances and identify losses.

CEENE-01. Knowledge of energy supply procurement systems.

Transversal:
1. 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

The teaching methodology used is a mixed methodology based on the application of PBL methodology together with a theoretical introduction. This structure allows students contextualizing the work to be developed.

LEARNING OBJECTIVES OF THE SUBJECT

The aim of the subject is to provide the basic knowledge of how the Spanish energy sectors are structured and managed, as well as a perspective on the regulatory framework for major activities of the various energy sectors.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Hours medium group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
</tbody>
</table>

Total learning time: 150 h
# CONTENTS

## (ENG) Introduction to Electricity Sector

**Description:**

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**Specific objectives:**
- Energy targets
- Sector structure
- Economic framework
- Administrative control

**Full-or-part-time:** 4h
Theory classes: 4h

## (ENG) Power generation I

**Description:**

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**Specific objectives:**
- Power generation as liberalized activity
- SES operation and economic mechanisms
- Power generation characteristics and economic consequences

**Full-or-part-time:** 4h
Theory classes: 4h

## (ENG) Power generation II

**Description:**

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**Specific objectives:**
- Renewable energy policies and applied legal frameworks
- Control deficiencies and renewable energy promotion
- Renewable energy and retroactivity
- New renewable energy legal framework

**Full-or-part-time:** 4h
Theory classes: 4h
### (ENG) Regulated activities

**Description:**

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**Specific objectives:**
- Legal framework and objectives
- Transmission and distribution activities
- The system operator
- The operator and the technical management

**Full-or-part-time:** 4h  
Theory classes: 4h

### (ENG) Electricity markets

**Description:**

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**Specific objectives:**
- Legal framework and objectives
- Whole sale market
- Retail market

**Full-or-part-time:** 4h  
Theory classes: 4h

### (ENG) Introduction to the Natural Gas Sector

**Description:**

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**Specific objectives:**
- Legal framework
- Infrastructure and management of the system
- The regulatory body
- Economic framework

**Full-or-part-time:** 4h  
Theory classes: 4h

### PBL_I

**Description:**

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**Full-or-part-time:** 60h  
Laboratory classes: 15h  
Self study: 45h
**PBL II**

**Description:**

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**Full-or-part-time:** 60h
- Laboratory classes: 15h
- Self study: 45h

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**Tests intended for the classroom**

**Description:**

These hours are intended to perform the various tests of continuous assessment associated with the contents of the course.

**Full-or-part-time:** 6h
- Theory classes: 6h

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**GRADING SYSTEM**

The evaluation will be conducted by carrying out different projects (and/or tests) related to the contents of the subject. The subject does not possess a reassessment process.

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**BIBLIOGRAPHY**

**Basic:**