

Course guides

820328 - RSE - Energy Sector Regulation

Last modified: 04/06/2021

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: 2021 **ECTS Credits:** 6.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: JORGE DE LA HOZ CASAS

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

Segon quadrimestre:
JORGE 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

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

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: 63h 30m

Theory classes: 11h
Laboratory classes: 7h 30m
Self study : 45h



PBL_II

Description:

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Full-or-part-time: 62h 30m

Theory classes: 10h

Laboratory classes: 7h 30m

Self study : 45h

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.

BIBLIOGRAPHY

Basic:

- Pérez-Arriaga, Ignacio J. Regulation of the Power Sector [on line]. 2a. London: Springer London, 2013 [Consultation: 11/06/2020]. Available on: <http://dx.doi.org/10.1007/978-1-4471-5034-3>. ISBN 9781447150343.