

Course guide

320171 - ECC - Energy and Climate Change

Last modified: 02/04/2024

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 709 - DEE - Department of Electrical Engineering.

Degree: BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Optional subject).

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

LECTURER

Coordinating lecturer: Juan Martínez Magaña

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Transversal:

1. SELF-DIRECTED LEARNING - Level 2: Completing set tasks based on the guidelines set by lecturers. Devoting the time needed to complete each task, including personal contributions and expanding on the recommended information sources.
2. SUSTAINABILITY AND SOCIAL COMMITMENT - Level 2. Applying sustainability criteria and professional codes of conduct in the design and assessment of technological solutions.
3. TEAMWORK - Level 2. Contributing to the consolidation of a team by planning targets and working efficiently to favor communication, task assignment and cohesion.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

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) TEMA 1 . BALANÇOS ENERGETICS

Full-or-part-time: 20h

Theory classes: 4h

Practical classes: 4h

Self study : 12h

(ENG) TEMA 2 . PROSPECTIVA ENERGÈTICA

Full-or-part-time: 26h

Theory classes: 8h

Practical classes: 6h

Self study : 12h

(ENG) TEMA 3 . CLIMA I CANVI CLIMÀTIC

Full-or-part-time: 132h

Theory classes: 8h

Practical classes: 4h

Self study : 120h

(ENG) TEMA 4 . MITIGACIÓ DEL CC

Full-or-part-time: 35h

Theory classes: 7h

Practical classes: 7h

Self study : 21h

(ENG) TEMA 5 . SOSTENIBILIDAD ENERGETICA

Full-or-part-time: 40h

Theory classes: 6h

Practical classes: 10h

Self study : 24h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- MacKay, David J. C. Sustainable energy. Cambridge: UIT, 2008. ISBN 9781906860011.
- El sistema eléctrico español: informe Madrid: Red Eléctrica de España, 2002-.
- La energía en España [on line]. Madrid: Ministerio de Industria, Energía y Turismo, 2001- [Consultation: 17/05/2020]. Available on: <https://energia.gob.es/ca-es/Paginas/estadisticas-informes.aspx>.
- International energy outlook [on line]. Washington: U.S. Energy Information Administration, 1995- [Consultation: 06/05/2020]. Available on: <http://www.eia.gov/forecasts/ieo/>.
- Key world energy statistics [on line]. Paris: International Energy Agency, 1997- [Consultation: 06/05/2020]. Available on: <https://www.iea.org/subscribe-to-data-services/world-energy-balances-and-statistics>.
- Statistical review of world energy [on line]. London: BP, 2012 [Consultation: 07/10/2022]. Available on: <https://www.bp.com/statisticalreview>.