



Course guides

820329 - REEN - Energy Resources

Last modified: 21/06/2021

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

Others: Primer quadrimestre:
LAURA VARO DOMENECH
GUILLERMO VELASCO QUESADA

Segon quadrimestre:
LAURA VARO DOMENECH
GUILLERMO VELASCO QUESADA

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

CEENE-19. Explain energy resources, their characteristics and where they come from.
CEENE-20. Assess and compare the energy capacitance and potential of the energy resources available.

Transversal:

04 COE N2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 2. Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well structured and free of spelling and grammatical errors.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

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

Total learning time: 150 h

CONTENTS

(ENG) Relacions entre energia i societat

Full-or-part-time: 6h

Theory classes: 2h

Self study : 4h

(ENG) Conceptes bàsics d'energia.

Full-or-part-time: 6h

Theory classes: 2h

Self study : 4h

(ENG) Formes d'energia, transformacions energètiques bàsiques i el seu rendiment.

Full-or-part-time: 12h

Theory classes: 4h

Self study : 8h

(ENG) Recursos energètics renovables i no renovables.

Full-or-part-time: 22h

Theory classes: 4h

Laboratory classes: 10h

Self study : 8h

(ENG) Recursos d'origen no renovable: Fòssil i nuclear.

Full-or-part-time: 36h

Theory classes: 12h

Self study : 24h

(ENG) Recursos d'origen renovable: Solar, geotèrmic o gravitatori.

Full-or-part-time: 57h

Theory classes: 19h

Self study : 38h

(ENG) Caracterització dels recursos energètics.

Full-or-part-time: 11h

Theory classes: 2h

Laboratory classes: 5h

Self study : 4h



GRADING SYSTEM

BIBLIOGRAPHY

Complementary:

- Sørensen, Bent E. Renewable energy : physics, engineering, environmental impacts, economy & planning. 4th ed. Burlington, Massachusetts [etc.]: Elsevier Academic Press, 2011. ISBN 9780123750259.
- Lambert, Tom; Gilman, Paul; Lilienthal, Peter. "Micropower System Modeling with HOMER". Farret, Felix A. Integration of alternative sources of energy : and alternative energy resources [on line]. West Sussex: John Wiley & Sons, 2006. Cap. 15 Available on: <http://onlinelibrary.wiley.com/book/10.1002/0471755621>.

RESOURCES

Audiovisual material:

- BP Statistical Review of World Energy <<http://www.bp.com>>
- World Energy Outlook <<http://www.worldenergyoutlook.org>>
- La Energía en España <<http://www.mityc.es/energia/es-ES/Paginas/index.aspx>>

Other resources:

Statistical bulletins published by different national and international official bodies