Last update: 14-10-2019

820329 - REEN - Energy Resources

Coordinating unit: 295 - EEBE - Barcelona East School of Engineering

Teaching unit: 710 - EEL - Department of Electronic Engineering

Academic year: 2019

Degree: BACHELOR'S DEGREE IN ENERGY ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
BACHELOR'S DEGREE IN ENERGY ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)

ECTS credits: 6 Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: GUILLERMO VELASCO QUESADA

Others: Primer quadrimestre:
ANGEL CUADRAS TOMAS - M23
JAVIER GARCIA ALVAREZ - M21, M22
GUILLERMO VELASCO QUESADA - M21, M22, M23

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.

Learning objectives of the subject

Study load

Total learning time: 150h	Hours large group:	45h	30.00%
	Hours medium group:	0h	0.00%
	Hours small group:	15h	10.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

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Content

(ENG) Relacions entre energia i societat	Learning time: 6h Theory classes: 2h Self study : 4h
(ENG) Conceptes bàsics d'energia.	Learning time: 6h Theory classes: 2h Self study : 4h
(ENG) Formes d'energia, transformacions energètiques bàsiques i el seu rendiment.	Learning time: 12h Theory classes: 4h Self study : 8h
(ENG) Recursos energètics renovables i no renovables.	Learning time: 22h Theory classes: 4h Laboratory classes: 10h Self study : 8h
(ENG) Recursos d'origen no renovable: Fòssil i nuclear.	Learning time: 36h Theory classes: 12h Self study : 24h
(ENG) Recursos d'origen renovable: Solar, geotèrmic o gravitatori.	Learning time: 57h Theory classes: 19h Self study : 38h
(ENG) Caracterització dels recursos energètics.	Learning time: 11h Theory classes: 2h Laboratory classes: 5h Self study : 4h

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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. 15Available on: <http://onlinelibrary.wiley.com/book/10.1002/0471755621>.

Others resources:

Statistical bulletins published by different national and international official bodies

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>