

## GUÍA DOCENTE ABREVIADA DE LA ASIGNATURA

### G1675 - Energy in the World Today

Doble Grado en Magisterio en Educación Infantil y en Educación Primaria

Grado en Magisterio en Educación Infantil

Grado en Magisterio en Educación Primaria

Curso Académico 2023-2024

1. DATOS IDENTIFICATIVOS			
Título/s	Doble Grado en Magisterio en Educación Infantil y en Educación Primaria		Tipología v Curso Optativa. Curso 3 Optativa. Curso 3
Centro	Facultad de Educación		
Módulo / materia	MATERIA LA ENERGÍA EN EL MUNDO HOY MÓDULO FORMACIÓN COMPLEMENTARIA O ESPECIALIZADA		
Código y denominación	G1675 - Energy in the World Today		
Créditos ECTS	6	Cuatrimestre	Cuatrimestral (1)
Web			
Idioma de impartición	Inglés	Forma de impartición	Presencial

Departamento	DPTO. FISICA APLICADA
Profesor responsable	ALFREDO FRANCO PEREZ
E-mail	alfredo.franco@unican.es
Número despacho	Facultad de Ciencias. Planta: + 3. DESPACHO (PAD) (3029)
Otros profesores	GUILLERMO SERRERA PARDUELES

### 3.1 RESULTADOS DE APRENDIZAJE

- To understand and assimilate the basic concepts and principles related to energy in all its facets , its economic and social importance and its prospects in the immediate future.
- To understand and know the qualitative and quantitative measurement methods and procedures related to the different forms of energy and their equivalences.
- To value, through this subject, the mutual influence between science, society and technological development to ensure a sustainable future.

#### 4. OBJETIVOS

Acquisition of the physical concept of energy in all its forms.

To understand the meaning, value and quantification of the "energy resources".

To understand the current situation regarding to the reserves , use and perspectives of the current different energy proposals and their alternatives, as well as their corresponding socio-economic implications.

#### 6. ORGANIZACIÓN DOCENTE

##### CONTENIDOS

1	1. Energy comes in many forms: mechanical, thermal, chemical, nuclear, electromagnetic ... energy. Forces, work and heat: expressions and most common units.
2	2. Transformation of energy: major processes of transformation of energy. Thermal and electrical machines.
3	3. Fossil fuels: coal, oil, gas, shale ..... Origin and consumption. Advantages and disadvantages.
4	4. Nuclear energy: nuclear fission and fusion. Advantages and disadvantages.
5	5. Renewable energy: hydro, solar, wind, biomass, tidal, ocean thermal. Expectations, advantages and disadvantages.
6	6. The energy in the world: economy and politics, environment, public perception, sustainability expectations.

## 7. MÉTODOS DE LA EVALUACIÓN

Descripción	Tipología	Eval. Final	Recuper.	%
Trabajo práctico	Otros	No	Sí	20,00
Evaluación continua	Otros	No	Sí	30,00
Examen final	Examen escrito	Sí	Sí	50,00
TOTAL				100,00

### Observaciones

#### PLAGIARISM:

In case of fraudulent (plagiarism) of the evaluation tests, the fraudulent accomplishment of the tests or evaluation activities will directly suppose the qualification of suspense '0' in the subject. It also implies to consider invalid any mark related to any assessment activity considered for an extraordinary assessment. Such situation will be informed to the Academic Center, as stated in ther article number 32 of the University of Cantabria regulations for assessment methods.

#### CITATION RULES:

Finally, the School Board approved that the Faculty assumes the APA RULES for all academic work as citation criteria . Although these standards have different editions , as an initial reference we attach the BUC link, hoping that this will be helpful and a reference for its development: <http://web.unican.es/buc/recursos/guias-y-tutoriales/guia?g=28>

#### MARKS IN CASE THAT THE MINIMUM MARK IS NOT REACHED IN A TEST:

If a student does not get the minimum required mark to approve an assessment test, then the subject global mark will be the minimum between 4,9 and the arithmetic mean of all the assessment tests, as it is stated in the article 35 of University of Cantabria regulations for assessment methods.

#### CONTINUOUS EVALUATION:

As it is stated in the assessment methods section, the students will be able to get, at least, the 40% of their final marks before the last lecture of the course, considering both the laboratory sessions and the works developed during the classes. In such a way, the article 17 of the University of Cantabria regulations for assessment methods is accomplished (at the end of the lectures period, the students had to be completed, at least, 40% of all the assessment activities involved in the subject final mark).

The practical work will consist of different oral presentations , individual and / or in group, with the subsequent debate, made during the class hours, related to the contents that are being taught.

The continuous evaluation will consist of a set of tests and written and / or verbal exercises, carried out during the class hours, in which the student will show the conceptual, vocabulary and operative level that will be acquired as the program is delivered.

#### EXTRAORDINARY CALL:

Students who do not pass the subject in the ordinary call will have an extraordinary exam similar to the final exam of the ordinary call, whose value will be 100% of the final grade.

### Crterios de evaluación para estudiantes a tiempo parcial

In agreement with article 24 of the University of Cantabria regulation for assessment methods, part-time students have the right to a unique assessment. Part-time students may be subject of a unique assessment process. The unique assessment allows the part-time student to get the same marks than the students under continuous evaluation. The unique assessment may be exam and/or deliverable works. In some exceptional circumstances may be required to be present and to show proficiency in some face-to-face acitivities (laboratory sessions, clinical activities, seminars, etc.).

## 8. BIBLIOGRAFÍA Y MATERIALES DIDÁCTICOS

### BÁSICA

- MacKay, D. (2008). Sustainable Energy-without the hot air. UIT Cambridge.
- Muller, R. A. (2012). Energy for future presidents: the science behind the headlines. WW Norton & Company.
- Davis, L. (2018). Body physics: Motion to metabolism. Open Oregon Educational Resources.

Esta es la Guía Docente abreviada de la asignatura. Tienes también publicada en la Web la información más detallada de la asignatura en la Guía Docente Completa.