Energy Sources

Academic Year: (2023 / 2024) **Review date: 31/05/2023 16:20:37**

Department assigned to the subject: Thermal and Fluids Engineering Department

Coordinating teacher: RODRIGUEZ SANCHEZ, MARIA DE LOS REYES

Type: Compulsory ECTS Credits : 3.0

Year : 2 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Ingeniería térmica

OBJECTIVES

Knowledge and capabilities for understanding, analyzing, exploiting and managing the different energy sources
Knowledge and capabilities to understand energy politics and standards
Understanding of the energy transition and decarbonization

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction to energy sources
2. Fossil fuels.
3. Nuclear energy.
4. Hydrogen.
5. Solar energy.
6. Biomass.
7. Wind energy.
8. Hydraulic power.
9. Geothermal energy.

LEARNING ACTIVITIES AND METHODOLOGY

Learning activities
1. Single group classes: theoretical and application problems.
2. 2 sessions will be laboratory practices in computer room where you will learn the use of direct application software related to energy sources.
3. Conferences of graduates in companies and public administrations on topics related to the subject.

Methodology:
1. Sessions in which the exposure of knowledge is combined with the realization of applied exercises carried out by the teacher and by the students.

Tutorials:
2. Check availability with the teacher.

ASSESSMENT SYSTEM

% end-of-term-examination/test:	40
% of continuous assessment (assigments, laboratory, practicals…):	60

Continuous assessment (60%) includes both labs and partial exam:
Labs: 20%, 10% each.
Midterm exam: 40 %.
In the partial exam, the contents taught will be evaluated until the week of its realization (approximately 2/3 of the contens of the course), leaving the rest of the contents for the final exam.

Final exam: 40%.

% end-of-term-examination/test:	40
% of continuous assessment (assigments, laboratory, practicals…):	60

BASIC BIBLIOGRAPHY

- null Documentantion prepared specifically for the course, -, 2023

- William C. Reynolds (Author), Piero Colonna Thermodynamics: Fundamentals and Engineering Applications , Cambridge University Press, 2018