uc3m Universidad Carlos III de Madrid

What futures await us? Climate change

Academic Year: (2023 / 2024) Review date: 17-07-2021

Department assigned to the subject: null

Coordinating teacher:

Type: Courses of humanities ECTS Credits: 3.0

Year: 1 Semester:

OBJECTIVES

- A) The students will learn the current knowledge of natural sciences about Climate Change. From there, they will understand the relationship between the human beings activities and the ecosystem, which will enable them to develop critical thinking and an ethical commitment.
- B) They will gain knowledge and awareness to assess the impacts of human actions on the environment, but also the environmental consequences in the society and the economy. Such an interconnection will enable the students to manage information and to recognize the global and local social phenomena.
- C) They will base their knowledge in the theoretical study of the relationship between society and environment.
- D) They will learn about the major challenges of human-ecosystem relationship, and how to interpret them from a structured perspective. That will enable them to recognize the complexity of the social phenomena.
- E) They will learn on how to synthesize and analyze the course readings.

DESCRIPTION OF CONTENTS: PROGRAMME

1. CLIMATE CHANGE

What is Climate Change as a Planetary Global Change?

Evidences of Climate Change: temperature increase; poles melting; sea level rising. Projections of evolution according to different scenarios: 1 strong mitigation; 2 intermediates; 1 high green house emissions.

2. Anthropogenic causes of Climate Change.

The greenhouse gases.

The causes: population size; economic activity; energy use (fossils: gas, oil, coal, the consumer lifestyle, land use models).

3. Impact on societies

Impacts and consequences for rich countries and for poor countries.

4. Possible solutions. What is being done to combat climate change? Policies. Technologies. Social Instruments.

LEARNING ACTIVITIES AND METHODOLOGY

The module is divided into two separate blocks: theoretical lectures and practical exercises. The theoretical lessons will be supported by the teacher using participatory tools to facilitate the exposition using overhead projector. The students will be given the presentations of each of the subjects that are projected in the classroom and therefore their knowledge will be evaluated with a final exercise in the classroom. The practical exercises will be done at the end of each topic. The different topics will be supported by relevant readings, newspaper articles, documentaries and films.

ASSESSMENT SYSTEM

- Active participation in the debates of the classes and the practices. 40% of the global qualification.
- An essay of a maximum of 4000 characters, on a news item on climate change, which appeared during the course development period. The written report of the work will represent 60% of the grade.

% end-of-term-examination: 60 % of continuous assessment (assignments, laboratory, practicals...): 40

BASIC BIBLIOGRAPHY

- Hector Tejero y Emilio Santiago ¿Qué hacer en caso de incendio? Manifiesto por el Green New Deal , Capitán Swing, 2019
- Hector Tejero y Emilio Santiago ¿Qué hacer en caso de incendio? Manifiesto por el Green New Deal , Capitán Swing, 2019
- IPCC IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse gas fluxes in Terrestrial Ecosystems Summary for Policymakers, WHO / UNEP, 2018
- United Nations Environmental Programme Climate Change 2014. Synthesis Report., UN, 2015
- pardo, mercedes; rodriguez, maribel Cambio Climático y Lucha contra la Pobreza, Siglo XXI / Fundación Carolina, 2008

BASIC ELECTRONIC RESOURCES

- BBC . Renewable Energy Sources:

http://www.bbc.co.uk/schools/gcsebitesize/geography/energy_resources/energy_rev2.shtml

- Biello, D. 2007, Scientific American . 10 Solutions for Climate Change: http://www.scientificamerican.com/article/10-solutions-for-climate-change/
- Environmental Protection Agency (EPA) . Climate Change: Basic information:

https://www3.epa.gov/climatechange/basics/

- IPCC, Intergovernmental Panel on Climate Change. WHO/UNEP. . Climate Change 2014:

http://www.ipcc.ch/report/ar5/syr/

- United Nations . Sustainable Development Goals:

https://sustainabledevelopment.un.org/post2015/transformingourworld