

**COURSE DATA****Data Subject**

Code	35007
Name	Environmental Changes: Scales and Processes
Cycle	Grade
ECTS Credits	6.0
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. Period	year
1318 - Degree in Geography and the Environment	Faculty of Geography and History	4	First term

Subject-matter

Degree	Subject-matter	Character
1318 - Degree in Geography and the Environment	590 - Environmental changes: processes and scales	Optional

Coordination

Name	Department
PEREZ CUEVA, ALEJANDRO	195 - Geography

SUMMARY

"Environmental Changes. Scales and Processes" is a subject that focuses on the change in environmental systems that occur or have occurred on Planet Earth. The main processes and changes at different scales, both temporal and spatial, are addressed. In the large-scale changes in the planet's environmental history, those that occurred in the Pleistocene will prevail. In those of a historical scale, those that occurred in the Mediterranean and European spheres. In the current environmental changes, those on a global scale, such as climate change, will prevail.



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

Relationship with other subjects of the same degree

No enrollment restrictions have been specified with other subjects in the curriculum.

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

1318 - Degree in Geography and the Environment

- Have capacity for analysis and synthesis.
- Learn about the time and space dimensions in the explanation of social, territorial and environmental processes.
- Learn about territorial and environmental management. Be able to integrate the social, economic and environmental components under the sustainable development approach.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

- Ability to understand the factors of the environmental evolution of the Earth and its repercussions.
- Ability to understand the influence of environmental elements, factors and processes in the historical evolution of human activity.
- Ability to understand the environmental impact of human presence in the territory.
- Ability to understand the current processes of environmental change on the planet.

DESCRIPTION OF CONTENTS

1. 1. Introduction to the subject

The concepts of environmental system and environmental change. Temporal scales in environmental changes. The spatial scales of environmental change



2. 2. Environmental Changes in Earth History

The history of the Earth and the great extinctions. Pleistocene environmental changes. Environmental changes and evolution of hominids. Holocene environmental changes

3. 3. Secular environmental changes in Europe and the Mediterranean world

Environmental changes and migrations. The history of the European and Mediterranean climate. The anthropization of the European and Mediterranean environment

4. 4. Global changes and climate changes today

The humans and global change. The environmental sorpasso. Climate change and its scenarios. Regional and local scales of current environmental changes: examples.

5. 5. Other processes and impacts of environmental change today

In biogeochemical cycles. In the lithosphere. In the biosphere. In the hydrosphere

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	30,00	100
Other activities	15,00	100
Classroom practices	15,00	100
Attendance at events and external activities	10,00	0
Development of individual work	20,00	0
Study and independent work	20,00	0
Preparation of evaluation activities	20,00	0
Preparing lectures	10,00	0
Preparation of practical classes and problem	10,00	0
TOTAL	150,00	

TEACHING METHODOLOGY

PRESENTIAL LESSONS. In the theory lessonss, the basic aspects of each topic will be explained and information about the materials and recommended readings will be given. In the practices there will be debates, exhibitions of examples and exhibitions of works. In the complementary activities there will be a field trip and a forum with personal exhibitions of works and discussion.



PERSONAL WORK Students will be able to carry out one or several individual or collective works, among the topics suggested or accepted by the teacher, with different value depending on their length, degree of difficulty and degree of participation. At least one piece of work will be required.

PRESENTIAL TUTORIALS: They are free, and will be attended at the time set at the door of the teacher's office.

EVALUATION

In the evaluation, the continuous assessment of the work throughout the semester will be combined with a final exam. The evaluation of directed works will be combined -in which practical exercises are included as well as the supervised elaboration of short works-, the participation of complementary activities -field trips, seminars and conferences- on which the students will elaborate brief memories that allow evaluating their learning, and taking an exam. The ability to carry out practical and applied work on real cases will be a fundamental element to evaluate the effectiveness of the learning process.

The evaluation model will be adjusted to the following percentages:

- Exam: 40%
- Works and directed practices: 45%
- Complementary activities: 15%

REFERENCES

Basic

- Fernández, A., Ponting, C. (1992) *Historia verde del mundo*. Barcelona, Paidós, 582 pp.
- Gore, A. (1992) *Earth in the Balance: Ecology and Human Spirit*. Boston, ---Houghton Mifflin, 416 pp.
- Gregory, K.J. y Walling, D.E. (1987) *Human Activity and Environmental Processes*. Chichester, Wiley & Sons, 466 pp.
- Martín Chivelet, J. (1999) *Cambios climáticos. Una aproximación al Sistema Tierra*. Libertarias-Prodhufi, Madrid, 328 pp.
- McNeil, J. R. (2003) *Historia medioambiental del mundo en el siglo XX*. Madrid, Alianza, 503 pp.
- Rull, V. (2020) *Quaternary ecology, evolution and biogeography*, London, Elsevier, 256 pp.
- Simmons, I.G. (1990) *Changing the Face of the Earth*. Oxford, Blackwell, 487 pp.

Additional

- Bryson, B. (2005) *Una breve historia de casi todo*. RBA, Barcelona, 625 pp.
- Cerdà, A. (2009) *Acció antròpica en el medi natural*. Universitat de València, , 789 pp
- Comellas, J. L. (2011) *Historia de los cambios climáticos*. Rialp, Madrid, 318pp.
- Lomborg, B. (2007) *El ecologista escéptico*. Madrid, Espasa Calpe, 685 pp.
- Marsh, G.P. (1885) *The earth as modified by human action*. 2^a ed. New York, Charles Scribner Sons, 674 pp.



Sapiña, F. (2005) El repte energètic. Gestionant el llegat de Prometeu. València, Edicions Bromera, Universitat de València, 160 pp.

Villarroya, F., Rebollo, L.F. y Pérez-Cueva, A.J. (2019) El sorpasso medioambiental. Rev. de la AEPECT, vol.2, nº 2, pp.131-139.

