

## 28337 - Methods for Paleoenvironmental Reconstruction

### Syllabus Information

**Academic year:** 2024/25

**Subject:** 28337 - Methods for Paleoenvironmental Reconstruction

**Faculty / School:** 103 - Facultad de Filosofía y Letras

**Degree:** 419 - Degree in Geography and Land Management

**ECTS:** 6.0

**Year:**

**Semester:** First semester

**Subject type:** Optional

**Module:**

### 1. General information

The main goal of the subject "Methods for the reconstruction of paleoenvironments" is that the student acquires knowledge about the main techniques and methods used in Quaternary research. The subject aims to answer a series of questions such as:

- What is the chronology of the Quaternary?
- What factors have generated climatic changes during the Quaternary?
- What are climate change indicators?
- What organisms and what fossil record characterize the Quaternary?
- What are the glacial-interglacial cycles?
- How can photointerpretation help the study of processes and forms associated with Quaternary paleoenvironments? These approaches and goals are aligned with the following Sustainable Development Goal: Goal 4: Education of quality.

### 2. Learning results

Identify and define the basic concepts of Quaternary chronology

To know the main sources of information available for the study of the Quaternary: drivers of climate change, indicators of climate change, organisms and the fossil record.

Identify and correctly express the rationale for the development of paleoenvironmental reconstructions, the problems encountered, and the solutions addressed.

To know the possibilities that the study of the Quaternary provides in the elaboration of environmental predictions in the global, regional and local context.

To know and apply photointerpretation techniques to the study of different processes and forms associated with Quaternary paleoenvironments.

### 3. Syllabus

The theoretical topics to be addressed in the subject are the following:

Unit 1.- The Quaternary: introductory aspects.

Unit 2.- Chronology of the Quaternary.

Unit 3.- The pre-Quaternary context: factors generating climatic changes.

Unit 4.- Climate change indicators.

Unit 5.- Organisms and fossil record during the Quaternary.

Unit 6.- Pleistocene: the glacial-interglacial cycles.

Unit 7.- Holocene: climatic variability.

### 4. Academic activities

1) Within the sessions developed in the classroom of theory and practices, the activities will consist of lectures participatory and classroom practices (solving problems and cases). The tutorials (tutored work), developed in the professor's office, will be aimed at monitoring the work and exercises of the learning portfolio to be solved individually by the students.

2) The non-face-to-face activities consist of the reading and understanding of the study material presented to the student and the completion of the directed work and the learning portfolio.

### 5. Assessment system

## I Call for Proposals

### Global assessment test

A) Objective written test that will include theoretical and practical questions. Weighting of 70%. Evaluation criteria: the accuracy of the answers to the questions posed and their correct approach and wording.

B) Directed work (Photointerpretation of processes and forms associated with Quaternary paleoenvironments). Weighting of 20%.

Assessment criteria: correctness in the process of photo interpretation and formal presentation.

C) Learning portfolio: composed of several exercises performed in class or assigned to the student. Weighting of 10%. Assessment criteria: the correctness of the exercises and practices performed and the formal presentation.

## II Call for Proposals

### Global evaluation test (to be taken on the date set in the calendar)

For those students who have not passed the course in the 1st call, there will be an objective written test that will include theoretical and practical questions. All the learning goals of the subject will be evaluated in , including questions related to the directed work and the exercises carried out in the learning portfolio. 100% weighting. Evaluation criteria: accuracy in answering the questions , correct approach, adequate wording and formal presentation.

## 6. Sustainable Development Goals

4 - Quality Education