Universidad Zaragoza

Academic Year/course: 2024/25

26438 - Technics in Paleontology

Syllabus Information

Academic year: 2024/25
Subject: 26438 - Technics in Paleontology
Faculty / School: 100 - Facultad de Ciencias
Degree: 296 - Degree in Geology
588 - Degree in Geology
ECTS: 5.0
Year: 4
Semester: Second semester
Subject type: Optional
Module:

1. General information

The purpose of this subject is for the student to acquire the knowledge and skills necessary to address any professional paleontological problem. The subject offers the necessary tools to solve technical issues related to field and laboratory work, restoration and conservation of fossils, management of collections, musealization of paleontological heritage, techniques for working with soundings and environmental conservation.

2. Learning results

Upon completion of the subject, the student will be able to:

- Know the applications, techniques and professional opportunities of Palaeontology in companies, administration and museum institutions.
- Provide technical advice on projects for the study, conservation and management of paleontological heritage.
- Extract, prepare and store fossils using the appropriate field and laboratory techniques for the different paleontological groups .
- Handle programs for data processing, statistics, drawing, etc. and image analysis.
- Handle and manage fossil collections.
- Technically advise, direct and/or execute musealization projects for exhibitions and museums, and for the enhancement of environments with
- a paleontological heritage.
- Apply paleontological techniques in the exploration and prospecting of geological and energy resources and in oceanographic studies
- Apply paleontological techniques in environmental conservation studies (detection of water quality and pollutants).
- Perform paleontological interventions including technical direction and control of paleontological excavations

3. Syllabus

- The professionalization of Palaeontology.
- Advanced paleontological field techniques: prospecting, sampling and collection of fossils, probing and excavation techniques, museum and enhancement of paleontological heritage.
- Paleontological laboratory techniques: preparation, preservation, casts and digitization of fossils.
- Techniques of musealization and enhancement of paleontological heritage.
- Management of fossil collections.
- Techniques for working with fossils from oceanic drilling.
- Isotopic palaeontology techniques and applications.
- Techniques in molecular palaeontology and biomarkers.

- Paleontological techniques applied to environmental monitoring, criminalistics and forensic sciences.

4. Academic activities

Participative master classes (14 face-to-face hours).

Laboratory practices (15.5 classroom hours).

Theoretical and participatory classes, case analysis and seminars (8 hours).

Special practices (field practices): 2.5 field days

5. Assessment system

- The **theoretical-practical part** will account for 70% of the overall grade. There will be a **global evaluation test**, which will include **multiple-choice** questions, open and free-response questions, and exercises/problem solving. For those students who opt for **continuous evaluation**, this grade will be calculated from the theoretical-practical exam (35%) and the laboratory practices (35%), being necessary to pass both parts. The continuous evaluation of the **practical part** will be done through the completion and delivery of practical laboratory and fieldwork.
- In addition, the student will carry out and present a **personal work** consisting of a museum project, which will represent 30% of the overall grade

Students who have passed the theoretical-practical part or the personal work in the first exam will keep the grade obtained, unless they wish to improve the grade for the second call.

6. Sustainable Development Goals

13 - Climate Action
14 - Life Below Water
15 - Life on Land