

26438 - Technics in Paleontology

Información del Plan Docente

Academic Year	2017/18
Faculty / School	100 - Facultad de Ciencias
Degree	296 - Degree in Geology
ECTS	5.0
Year	4
Semester	Second semester
Subject Type	Optional
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

Evaluation

70%- Exam at the end of the semester, including:

-short questions

-open questions

26438 - Technics in Paleontology

-exercises/problems similar to those addressed in the laboratory and during field work campaigns.

30%- Individual essay on a specific subject of Technical Palaeontology. The essay will be presented and defended during a seminar.

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

The course is eminently practical, and the proposed activities are aimed at understanding and assimilation of content from personal experience ("Hands-on"). The knowledge acquired in lectures is complemented by practical laboratory activity and seminars, where the student will learn and demonstrate methods and analyses, and their application. In personal work, the student must demonstrate the ability to investigate, present and defend a report on subjects related to technical Paleontology.

For better monitoring of the learning process, students will be encouraged to use the tutorials through various systems and methods: conventional tutorials, more specific tutorials related to practical work-type seminar, and the possibility of carrying out telematic tutorials.

5.2.Learning tasks

The following activities are offered to help the student to achieve the expected results:

Programmed activities

1. Lectures (14 hours, 1,4 ECTS)
2. Laboratory (16 hours, 1,6 ECTS).
3. Case studies and seminars. (8 hours, 0,8 ECTS)
4. Field work (12 hours, 3 days, 1,2 ECTS)

5.3.Syllabus

26438 - Technics in Paleontology

1. Lectures (14 hours, 1,4 ECTS)

-Introduction. The professionalization of Palaeontology. The role of a palaeontologist in companies, as freelance, or as a technician in the administration and in museums.

-Paleontological techniques I. Field work. Prospecting, sampling and collection of fossils. Excavation and documentation techniques.

-Paleontological techniques II. Laboratory work. Fossils reconstruction, conservation and documentation.

-Museum techniques in Palaeontology. Paleontological heritage.

-Management of collections. Documentation and storage techniques. Special collections.

-Techniques to work with fossils from ocean cores.

-Techniques in molecular palaeontology and organic biomarkers.

-Paleontological techniques applied to environmental monitoring (water quality, pollution). Applications of Palaeontology in criminalistics and forensic sciences.

2. Laboratory (16 hours, 1,6 ECTS).

-Paleontological techniques in the laboratory: macrofossil reconstruction, preparation, conservation and replicates.

-Palaeontology in the museums: techniques.

26438 - Technics in Paleontology

- Management of collections.

-Moulds of macro and microfossils.

-Digitalization techniques.

3. Case studies and seminars. (8 hours, 0,8 ECTS)

-Seminars for essay presentations.

-Paleontological techniques applied to exploration of geological resources, oceanographic studies, and environmental monitoring. Techniques to work with ocean cores.

4. Field work (12 hours, 3 days, 1,2 ECTS)

-Advanced field work techniques: fossil prospection, sampling and collection. Coring and excavation techniques.

5.4.Course planning and calendar

The lectures will be held on Wednesday and Thursday from 11:00 to 12:00 throughout the second semester.

The practical sessions will be held on Wednesday from 12:00 to 14:00.

5.5.Bibliography and recommended resources

BB Alonso Fernández, Luis. Museología y museografía / Luis Alonso Fernández . - 1a. ed. Barcelona : Ediciones del Serbal, 1999

BB Hernández Hernández, Francisca. Manual

26438 - Technics in Paleontology

de museología / Francisca Hernández
Hernández Madrid : Síntesis, D.L. 1994

BB Leiggi, P. & May, P.. Vertebrate
Paleontological Techniques. Cambridge
University Press. 2005

BB (Ver URLs) Pearson, P.N. 2012. Oxygen
isotopes in foraminifera: overview and
historical review. En: (Linda C. Ivany and
Brian T. Huber, eds.) Reconstructing
Earth's Deep-Time Climate—The
State of the Art in 2012. The
Paleontological Society Papers, Volume
18, pp. 1-38.

LISTADO DE URLs:

Deep-sea drilling -
[<http://www.deepseadrilling.org/about.htm>]

Integrated Ocean Drilling Program -
[<http://www.iodp.org/>]

Pearson, P.N. 2012. Oxygen isotopes in
foraminifera: overview and historical
review. En: (Linda C. Ivany and Brian T.
Huber, eds.) Reconstructing Earth's
Deep-Time Climate—The State of
the Art in 2012. The Paleontological
Society Papers, Volume 18, pp. 1-38. -
[<http://orca.cf.ac.uk/41988/>]