UAB
Universitat Autònoma de Barcelona

2019/2020

Research in Paleontology, Heritage Management and Geotourism

Code: 43861
ECTS Credits: 12

Degree	Type	Year	Semester
4316238 Paleobiology and Fossil Record	OB	0	A

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Teachers

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Use of Languages

Principal working language: english (eng)

Prerequisites

There are no pre-requirements.

Objectives and Contextualisation

This module is articulated in three different fields and provides the tools and knowledge to guide the professional in paleontology. It addresses practical issues as completion of administrative procedures of paleontological heritage management, environmental reports, legislation, collections management, preparation, dissemination and museology. The management of scientific results to get the most out this data, from databases to publication of the results in high impact factor journals.

Competences

- Communicate and justify conclusions clearly and unambiguously to both specialised and non-specialised audiences.
- Continue the learning process, to a large extent autonomously.
- Defend the results, respecting and discussing those of others in English.
- Demonstrate knowledge about the monitoring of public and private work to identify and document factors affecting paleontological heritage.

- Design and carry out research projects in paleobiology and communicate and disseminate the results of the knowledge acquired.
- Gather and synthesize information from scientific literature (library, data bases, online journals, contrasted web pages).
- Identify fossilization processes and avoid taphonomic biases in the study of the biology of organisms from the past.
- Obtain original data by means of field or lab work and process them adequately to resolve questions of a paleobiological profile.
- Show a critical and self-critical capacity.
- Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
- Use a scientific argument in English to justify research results .
- Use acquired knowledge as a basis for originality in the application of ideas, often in a research context.

Learning Outcomes

1. Adapt the research results to make them available to different audiences.
2. Apply knowledge of taphonomic processes to the conservations techniques of the fossil register.
3. Communicate and justify conclusions clearly and unambiguously to both specialised and non-specialised audiences.
4. Continue the learning process, to a large extent autonomously.
5. Defend their own results, respecting and discussing the results of others.
6. Draw up a research project for public and private grant funding.
7. Gather and synthesize information from scientific literature (library, data bases, online journals, contrasted web pages).
8. Identify the problems and propose lowest impact solutions for the paleontological heritage during public works.
9. Identify the stages for carrying out technical monitoring of works.
10. Integrate field and laboratory data to interpret processes of fossilization.
11. Know and control the different study, conservation and dissemination techniques of the vertebrate fossil register.
12. Know and make scientific use of paleontological collections.
13. Know the main tool regulating and allowing the management of the paleontological heritage.
14. Know the scientific value of fossil excavations in the country.
15. Organise and manage activities in museology.
16. Prepare a research article appropriate for a high impact publication.
17. Show a critical and self-critical capacity.
18. Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
19. Understand how a monitoring report on public works with factors affecting paleontological heritage should be designed.
20. Understand the methods and techniques for the conservation and management of paleontological collections.
21. Understand the methods and techniques for the museumisation of paleontological excavations in open spaces.
22. Understand the techniques for the study and conservation of excavations.
23. Use acquired knowledge as a basis for originality in the application of ideas, often in a research context.
24. Use communication tools for non-specialised audiences.
25. Use scientific argumentation to justify the results of research.
26. Write a paleontological monitoring report in the framework of current legislation for the protection of natural and cultural heritage.

Content

Technical management and research in paleontology. Designing and monitoring technical projects (environmental impact reports, impact on archaeological and/or paleontological heritage, follow-up reports of public works with impact on paleontological heritage, reports of paleontological excavations). Design of a paleontological research project within the public calls for R + D.

Management, museology and dissemination of the paleontological-geological heritage (geotourism). Conceptualization of paleontological-geological heritage and interventions, and their normative framework, including the UNESCO geoparks regulations. Typologies of paleontological sites. Databases and inventories. GIS applied to the planning and management of the heritage. Fossil preparation techniques, cataloguing, registration and management of collections. Conservation of paleontological materials, museology and museography. Analysis of paleontological heritage institutions. Musealized paleontological sites. Cultural and natural tourism, importance of geoparks and geotourism. Communication and dissemination strategies in paleontology.

Preparation and management of scientific publications. Preparation of scientific papers for SCI journals of low and high impact factor. Design and structuring of a paleontological research work. How to publish in SCI journals. How an SCI magazine works. Strategies of publication. Managers of bibliographic references (Mendeley, RefWorks, Bibme) and social networks of professionals and scientific papers (ResearchGate, Academia.edu, NatureNetwork).

Methodology

Theory lectures

Practical classes

Field trips

Problem-based learning

Work preparation and delivery

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lectures	60	2.4	1, 2, 19, 14, 20, 21, 12, 11, 13, 22, 6, 9, 8, 10, 7, 15, 16, 18, 3, 4, 26, 23, 24
Type: Supervised			
Field trip	7.5	0.3	22, 10, 18, 4
Practical classes and seminars	76.5	3.06	1, 2, 19, 20, 21, 11, 9, 10, 15, 16, 18, 3, 23, 24, 25
Type: Autonomous			
Work preparation and delivery, and autonomous study	156	6.24	5, 17, 7, 18, 3, 4, 23, 25

Assessment

Exams: 40%

Delivery of reports/ works: 50%

Class attendance and active participation: 10%

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Class attendance and participation	10%	0	0	5, 17, 18, 3, 4, 23, 25
Delivery of reports/ works	50%	0	0	1, 2, 19, 14, 20, 21, 12, 11, 13, 22, 5, 17, 6, 9, 8, 10, 7, 15, 16, 18, 3, 4, 26, 23, 24, 25
Exams	40%	0	0	2, 14, 20, 12, 11, 13, 22, 17, 8, 10, 18, 3, 23, 25

Bibliography

The list of specific literature will be provided by the professor at the end of each lesson.