COURSE DATA

DATA SUBJECT

Code: 46750
Name: Management and conservation of palaeontological heritage
Cycle: Master's Degree
ECTS Credits: 3
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
2266 - Master's Degree in Applied Palaeontology	Facultat de Ciències Biològiques	1	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2266 - Master's Degree in Applied Palaeontology	Management of palaeontological heritage	ELECTIVES

COORDINATION

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SUMMARY

It is a subject on which addresses contained concepts in the current environment legislation, referring to the protection and conservation of the paleontological heritage, managing to interrelate this finger heritage with the different types of heritage natural members of the Sciences of the Earth and life. The analysis of inventories from casuistry in Spain allow for students to acquire global view of the current state of movable and immovable heritage and its importance as a resource no renewable in our society.

Through the work staff cases studies, achieved a self-supervised the different thematic blocks raised and the ability to use the resources will also be obtained paleontological as fundamental tools in the development and management of a territory. so be it acquires an approach applied in the heritage paleontological, the reason is presumed basic in anymodel of management present territorial.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

OTHER REQUIREMENTS

Knowledge basic about the structure organization of the administration Spanish for Heritage History and Environment.

COMPETENCES / LEARNING OUTCOMES

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Access information tools from other areas of knowledge and use them appropriately.

Access the necessary information in the specific field of the subject (databases, scientific articles, etc.) and have sufficient judgement to interpret and use it.

Apply critical reasoning and argumentation based on rational criteria.

Apply science from a social and economic point of view, promoting the transfer of knowledge to society.

Apply the knowledge acquired and problem-solving abilities in new or unfamiliar situations within broader (or multidisciplinary) contexts related to the field of study.

Apply the research experience acquired to tasks specific to the profession, both in the private sector and in public institutions.

Assess the need to complement their scientific, historical, language, IT, literature, social and human ethics education by attending lectures or courses and/or carrying out complementary activities, self-evaluating the contribution that these activities make to their overall education.

Assume an ethical commitment and sensitivity towards environmental problems and natural and cultural heritage.

Be familiar with, develop and manage georeferenced databases of elements from the geological and palaeontological record, as well as the software used for the spatial representation and analysis of these elements.

Communicate and popularise scientific ideas.

Communicate conclusions and the knowledge and rationale supporting them to specialised and non-specialised audiences clearly and unambiguously.

Conduct studies, applying the methods and techniques needed to preserve and manage palaeontological heritage.

Continue the learning process in a manner that is largely self-directed or independent.

Demonstrate in-depth understanding of the historical nature of the evolutionary process, both in its aspects of unrepeatability and contingency and in those linked to the fulfilment of laws of nature of all kinds and, therefore, of necessity.

Demonstrate intellectual curiosity and encourage responsibility for one's own learning.

Demonstrate knowledge and understanding of the legal foundations for the protection and conservation of palaeontological heritage at the level of the EU, Spain and the Spanish Autonomous Communities.

Develop experimental skills in the handling of laboratory material and equipment in palaeontology.

Have an in-depth knowledge and understanding of the regional geology of Spain and surrounding areas, particularly the Valencian Community, with detailed knowledge of the main palaeontological sites found in the Iberian Peninsula and North Africa.

Integrate knowledge and confront the complexity of making judgements based on information that, although incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of knowledge and judgements.

Know, understand and draw conclusions, applicable to the present time, about the crises of biological diversity, and their causes and consequences within the framework of actualism.

Know and understand the palaeodiversity of living beings, their ecosystemic relationships and the palaeogeographical distribution achieved by the main groups of living beings throughout the Earth's history.

Learn about the techniques used in museums for the management of palaeontological heritage, identifying, during guided work visits, successful examples in the field of palaeontology (Dinópolis, the Catalan Institute of Palaeontology, the Palaeontological Museum of Elche).

Make quick and effective decisions in complex situations in their professional or research work, by developing new and innovative work methodologies adapted to the scientific/research, technological or professional field in which they carry out their activity.

Plan and manage available resources, taking into account the basic principles of quality, risk prevention, safety and sustainability.

Prepare, write and present reports and projects in public in a clear and coherent manner, defend them with rigour and tolerance and respond satisfactorily to any criticism that may arise from the presentation.

Produce all types of reports related to palaeontological matters clearly and concisely at an official or professional level (reports, grants, heritage impact reports, research projects, etc.)

Skillfully handle the field, laboratory and office techniques for the extraction, preparation, cataloguing, digital reconstruction, study and dissemination of microfossils and macrofossils.

Use acquired knowledge as a basis for originality in the development or application of ideas, often in a research context.

Work efficiently in a professional or research team, acquiring the ability to participate in research projects and scientific or technological collaborations.

DESCRIPTION OF CONTENTS

1. THEORETICAL CONTENTS

Unit 1.- Geodiversity. Elements of geodiversity. Concepts of natural and geological heritage and paleontological. Type of heritage. Heritage furniture and heritage property. Valuation of the heritage.

Unit 2.- Distribution and representation at level of the Spanish State of the paleontological heritage. Inventory systems (databases).

Unit 3.- Basic notions on organization of the Spanish administration in reference to the protection of heritage cultural and natural: levels national, regional, provincial and local. European and international regulations. Foundations 's legal regulation of protection of paleontological heritage. Areas of competence at state and regional level.

Unit 4.- Legislative frame of: protection of the Cultural Heritage and of the Natural Heritage in the State Spanish and at the regional level. Substantive competence. The paleontological heritage in the Legislation of Heritage Cultural.

Unit 5.- The paleontological heritage to the legislation of protection of the Natural Heritage and of the law assessment of the impact on the environment.

Unit 6.- Figures of protection in the field of paleontological heritage. Models of management. Use of the values paleontological in the development of projects of dissemination: museums, parks, theme, others performances. Importance heritage of GSSP, localities types. Use in local development.

2.

Practice 1.- Examples of integration of the paleontological heritage in the geological heritage.

Practice 2.- Inventory of paleontological heritage. Inventory. GIS tools in cartography. Topographic and geological maps. Elaboration of thematic cartography. Inventory of areas, Formations, points of interest, etc., based on their paleontological content. Design of areas of protection.

Practice 3.- Environmental Impact Assessment Procedures and Paleontological Heritage. Inventory. Geological Points of Interest. Urban Regulations (General Urban planning plans-PGOU). Application to a practical example.

3. SEMINARS

Seminar 1.- Conference on the administrative management of paleontological heritage in the Region of Murcia. (Gregorio Romero Sánchez, technician of the Historical Heritage Service of the General Directorate of Culture. Ministry of Education and Culture of the Region of Murcia).

Seminar 2.- Conference on Environmental Impact Assessment Procedures and paleontological heritage in the Valencian Community. (Technicians to be appointed from the Ministry of Agriculture, Environment, Climate Change and Rural Development)

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	10,00
Seminar	2,00
Laboratory	18,00
Total hours	**30,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	0,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**0,00**

TEACHING METHODOLOGY

Theoretical and practical classes

- Lessons lectures with presentations by computer

- Face-to-face personal work of legislative practical cases

- Preparation and consultations database data with guidance of professor

- Writing reports with a teacher's guide on legislative practical cases

- Exhibition and public defense of the work done in groups

- Controls

- Tests and exams

- Output field

Classes practices of laboratory-cabinet

- Introduction and planning of each practice

- Making observations, taking data, collecting information

- Evaluable individualized work:

  • Preparation and consultations database data with guidance of professor

  • Completion Report

Seminars:

- Attendance at conferences and theoretical - practical seminars of specialists that complement the

training received in other subjects

- Elaboration of diverse materials and documents in theoretical and practical activities

- Evaluable individualized work:

  • Preparation of reports on exposed content

  • Completion Report

EVALUATION

The evaluation of the theoretical and practical aspects of the subject will be carried out by means of tests written individually or in groups, to long for the semester for assessment continuous of technical competences of the subject, in which questions of theoretical nature will be raised and related to practical assumptions, In the continuous assessment will also be taken into account the attendance and use of classes. This assessment will be complemented by the final test written, individually, of the subject.

The seminars will be valued according to the attendance and participation of the student in the discussion. The student will prepare a report which shows the its capacity of synthesis and interrelation of the concepts discussed.

The work of the practice of laboratory-cabinet evaluated by the rating of a Report performed individually, or in very small groups, focusing on the application of an assumption practical.

The weight (percentage on the final mark) of the aspects considered in the evaluation of the

subjectare reflected in the following table:

Weighting assessment activities

Final test 50%

Practices of laboratory 15%

Seminars reports 10%

Continuous assessment tests 25%

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- Alcála, L. 2000. El patrimonio paleontológico turolense como recurso propio para el desarrollo cultural y turístico. Los retos de Teruel, 2000, ISBN 84-86982-98-7, págs. 541-546. - Alcála, L. 2000. El patrimonio paleontológico turolense como recurso propio para el desarrollo cultural y turístico. Los retos de Teruel, 2000, ISBN 84-86982-98-7, págs. 541-546. - Bruschi, V.M. 2007. Desarrollo de una metodología para la caracterización, evaluación y gestión de los recursos de la geodiversidad. Tesis doctoral. Universidad de Cantabria. - Meléndez-Hevia, G. y Soria, M. 1997. Problemática actual de la legislación sobre patrimonio paleontológico en España: Medidas y soluciones. Zubía, ISSN 0213-4306, Nº 15, 1997, págs. 113-120. Morales, J., Gómez-Ruiz, E. y Azanza, B. 1999. El Patrimonio Paleontológico Español. Coloquios de Paleontología (ISSN 1132-1660), Nº 50, 53-61. - López-Martínez, N. 1995. Los fósiles: patrimonio natural. Nº. 11, 1995 (Ejemplar dedicado a: Paleontología), págs. 54-58. Tierra y tecnología: revista de información geológica, ISSN 1131-5016. - Robles, F., de Renzi, M., Montoya, P. y Belinchón, M. 1999. La

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