VNIVERSITAT DE VALÈNCIA

Course Guide
43250 Evolutionary paleobiology

COURSE DATA

Data Subject	
Code	43250
Name	Evolutionary paleobiology
Cycle	Master's degree
ECTS Credits	3.0
Academic year	2019 - 2020

Study (s)

Degree	Center	Acad. year	Period
2148 - M.D. in Biodiversity: Conservation and Evolution	Faculty of Biological Sciences	1	First term

Subject-matter

Degree	Subject-matter	Character
2148 - M.D. in Biodiversity: Conservation and Evolution	5 - Cross-disciplinary optional subject areas 1	Optional

Coordination

Name	Department
BOTELLA SEVILLA, HÉCTOR	356 - Botany and Geology

SUMMARY

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Las ideas evolutivas y su historia. La teoría sintética de la evolución. La lectura evolutiva del registro fósil: tasas evolutivas y pautas de evolución. Micro y macroevolución. Nociones básicas de la teoría de sistemas y su aplicación a la teoría de la evolución. Individuos y unidades de selección en sus distintos niveles. Gradualismo filético y equilibrio interrumpido. Desacoplamiento entre micro y macroevolución. Aspectos estocásticos de la evolución contemplada a través de los datos paleontológicos. Mecanismos macroevolutivos. Diversidad y disparidad: macroevolución y evolución morfológica. La consideración del desarrollo embrionario (evo-devo). Nociones de biomorfodinámica: la Morfología como evidencia del cambio evolutivo; los factores que determinan la forma orgánica; aproximaciones a las Morfologías evolutiva, Teórica y Funcional; isometría y alometría. Conceptos Limitaciones (constraints) a la evolución morfológica. Hacia una teoría de la evolución ampliada. Extinciones: su papel en macroevolución. Tipos de extinciones: .de fondo, en masa y episódica. Aspectos estocásticos de las extinciones. Las causas clásicas de la extinción en masa. Dinámica de la biodiversidad durante el Fanerozoico: faunas y floras evolutivas.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

No existen restricciones de matrícula con otras asignaturas del plan de estudios. No obstante es recomendable tener unos conocimientos mínimos de Zoologia, Botanica y Ecología, así como de Geología general y Paleontología.

OUTCOMES

2148 - M.D. in Biodiversity: Conservation and Evolution

- Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.
- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- Students should possess and understand foundational knowledge that enables original thinking and research in the field.
- Be able to access to information tools in other areas of knowledge and use them properly.
- To be able to assess the need to complete the scientific, historical, language, informatics, literature, ethics, social and human background in general, attending conferences, courses or doing complementary activities, self-assessing the contribution of these activities towards a comprehensive development.
- Stimulate the capacity for critical reasoning and for argumentation based on rational criteria.
- Favour intellectual curiosity and encourage responsibility for one's own learning.
- Be able to communicate and disseminate scientific ideas.

LEARNING OUTCOMES

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WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	20,00	100
Laboratory practices	10,00	100
Study and independent work	45,00	0
TOTAL	**75,00**	

TEACHING METHODOLOGY

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EVALUATION

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REFERENCES

Basic

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Additional

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ADDENDUM COVID-19

This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council

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