28337 - Methods for Paleoenvironmental Reconstruction

Información del Plan Docente

Academic Year	2016/17
Academic center	103 - Facultad de Filosofía y Letras
Degree	419 - Degree in Geography and Land Management
ECTS	6.0
Course	
Period	Half-yearly
Subject Type	Optional
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

The learning and teaching methodology developed in the course *Métodos para la reconstrucción de paleoambientes* is aimed to promote the attainment of its objectives. A wide range of teaching and learning activities is implemented, such as interactive lessons, practical exercises, individual or group activities, directed activities, field work and private study. Extensive material will be available *via* the Moodle site of the course. This offers a variety of resources including a repository of the lecture notes used in class as well as other forms of course-specific materials.

5.2.Learning activities

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Lecture sessions

Usually, after a presentation of the conceptual and methodological aspects of the program we introduce interactive, individual or group activities. Diverse teaching and learning skills are put into practice to encourage the participation of students like class whispering, brainstorming, forums, etc. The students have in the *Anillo Digital Docente* (Moodle Site) a repository of the lecture notes used in class as well as other forms of course-specific complementary materials (recommended readings, web pages links, graphic and cartographic resources, etc.).

Interactive, individual or group activities and Laboratory sessions.

These practical sessions will take place in the assigned classroom or, punctually, in the computer classroom. Beginning every session the necessary information will be facilitated to the student to carry out the tasks to be developed in the practice. Among the activities that are programmed we can stand out: photointerpretation and elaboration of geomorphological cartography; reading, analysis and comment of different documents, etc.

Field work

This session will serve to examine on the field some of the contents developed in the theoretical and practical activities (dating methods, interpretation of deposits of Quaternary age, etc.).

Directed activities

They are implemented to help the students to carry out the works and exercises that they must solve individually and also as a help to solve doubts related with the theoretical and practical program of the course.

5.3.Program

The lecture course will address the following main issues:

Theme 1. - The Quaternary: introductory aspects.

Theme 2. - Chronology of the Quaternary.

Theme 3. - The pre-Quaternary context: climate changes generating factors.

Theme 4. - Climate changes indicators.

Theme 5. - Organisms and fossil record during the Quaternary.

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Theme 6. - Pleistocene: the glacial-interglacial cycles.

Theme 7. - Holocene: climate variability.

5.4.Planning and scheduling

The course *Métodos para la reconstrucción de paleoambientes* is divided into 7 themes. The first and second themes are introductory; they run during the first four weeks of the term. The themes 3-5 are taught during the middle part of the semester. The themes 6 and 7 are worked during the final month of the course.

For further details concerning the timetable, classroom and other information of the course please refer to the: *Facultad de Filosofía y Letras* web site (https://fyl.unizar.es/horario-de-clases#overlay-context=horario-de-clases).

5.5.Bibliography and recomended resources

Basic bibliography:

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EHLERS, J., HUGHES, P. y GIBBARD, P.L. (2015): *The Ice Age* , Wiley-Blackwell, London, 560 pp.

Recommended bibliography:

BRADLEY, R.S. (1985): *Quaternary paleoclimatology. Methods of paleoclimatic reconstruction* , Allen & Unwin, London, 472 pp.

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RISER, J.A.M. (2002): *Quaternary geology and the environments* , Springer, New York, 290 pp.

STANLEY, S.M. (1989): *Earth and Life through Time* , Freeman, New York, 689 pp.

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URIARTE, A. (2003): *Historia del clima de la Tierra* , Servicio Central de Publicaciones del Gobierno Vasco, Vitoria, 306 pp.

VEGA, G., BERNABEU, J. y CHAPA, T. (2006): *La prehistoria* , Editorial Síntesis, Madrid, 271 pp.

VÁZQUEZ ABELEDO, M. (1998): *La historia del Sol y el cambio climático* , McGraw Hill, Madrid, 488 pp.

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WILLIAMS, M.A., DUNKERLEY, D.L., De DECKKER, P., KERSHAW, A.P. y STOKES, T. (1993): *Quaternary Environments* , Edward Arnold, New York, 329 pp.