

26431 - Geomorphological and Geoenvironmental Mapping

Información del Plan Docente

Academic Year	2016/17
Academic center	100 - Facultad de Ciencias
Degree	296 - Degree in Geology
ECTS	5.0
Course	4
Period	Second semester
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

This subject deals with the conceptual and methodological tools to develop geomorphological maps and cartographic documents of interest in environmental land use planning and management. Characterization of surficial deposits, assessment of active processes and differentiation of geomorphological land units are also carried out.

5.2. Learning activities

- Activity 1. Practical sessions. Elaboration of geomorphological, active processes and environmental land units maps, from aerial photographs and regional geological data of a case study.

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- Activity 2. Fieldwork. Recognition and characterization of landforms and surficial deposits.

5.3.Program

Part 1. Geomorphological mapping

1. Introduction to Geomorphological mapping: concept, scale and methods. Guide for elaboration of Geomorphological maps by the Geological Survey of Spain.
2. Information to be considered: morphogenetic, morphochronological and morphodynamics aspects.
3. Surficial deposits: characteristics and representation in maps.
4. Active processes map: morphodynamic information, detailed map of active processes, activity assessment.

Part 2. Geoenvironmental mapping

1. Introduction to Geoenvironmental mapping: concept of geomorphological land unit.
2. Synthesis and definition of homogeneous geomorphological land units from morphostructural data, genetic features and active processes.
3. Mapping of homogeneous geomorphological land units.
4. Parametric files of geomorphological land units.

Part 3. Field work

- Recognition of the local landscape differentiating erosive and accumulative landforms
- Validation of the preliminary produced geomorphological scheme mapping
- Assessment of active processes and description of superficial deposits

5.4.Planning and scheduling

The subject development includes practical sessions and fieldwork. Practical sessions are on Wednesdays from 16:00 to 19:30. Fieldwork consists of two field trips in March and April, according to the schedule approved by the Earth Science Department. Work reviews and exams are in June, according to the schedule of the Science Faculty.

Credit hours: 5 ECTS, including both lab sessions (4.3 ECTS) and fieldwork (two days = 0.7 ECTS).

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5.5. Bibliography and recommended resources

BB Cartografía geomorfológica básica y aplicada / José Luis Peña Monné, editor ; [José Luis Peña Monné ... (et al.)] . - 1a ed. Logroño : Geoforma, 1997

BB Mapa geomorfológico de España a escala 1: 50.000 : guía para su elaboración / A. Martín Serrano... [et al.] Madrid : Instituto Geológico y Minero de España, 2004