26409 - Geomorphology

Información del Plan Docente

Academic Year	2017/18
Faculty / School	100 - Facultad de Ciencias
Degree	296 - Degree in Geology
ECTS	8.5
Year	2
Semester	Annual
Subject Type	Compulsory
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

Assessment details

The student must demonstrate that has achieved the intended background through the following evaluation activities:

Evaluation Activities

Written test on the basic knowledge of Geomorphology acquired in lectures, seminars and practical sessions. The written

tests will consist of a review of questions of long and short answer, multiple choice and True and False case resolution. In these tests there will be evaluated the theoretical contents acquired so much in the theoretical classes as in the seminars, as well as of diverse aspects seen in practices of office and field.

Elaboration, presentation and defense in seminars of a bibliographical work on some of the topics proposed by the teacher. Students will prepare individually or in pairs a bibliographical work with a summary in English on someone of the topics proposed by the teacher. The production of the work will on a written memory of a maximum of 25 pages. The exhibition will be made public through a power point presentation lasting 15 minutes plus 5 minutes for discussion.

Preparation of maps and reports on practices of office and seminars. Students will complete exercises and geomorphological mapping developed by interpreting aerial photographs.

Attendance and participation of students in the field practices. During the fieldtrips the teacher, in view of the obligatory character of the same ones will check the assistance by means of a control of signatures. The assessment of student achievement at the fieldtrips will be held by several of questions in the written exams relative to the different seen aspects analyzed or visited in fieldtrips.

Continuous evaluation: Evaluation and Qualification Criteria

The valuation or qualification of the different activities of evaluation will be realized following the following criteria:

- Test or exam on the basic knowledge of Geomorphology acquired in the magisterial participative classes, the seminars and the practical meetings. This note will suppose 60 % of the final note of the subject.
- Elaboration, presentation and defense in seminars of a bibliographical work on some of the topics proposed by the teacher. It is obligatory to attend at least 75 % of the presentations. The evaluation of these jobs will be held by a rubric. The note of the work will be 50% oral, 30 % ppt presentation, 20 % of heading assessment of the remaining partners. This note will represent 20 % of the final grade for the course
- Preparation of maps and reports on practices and seminars. This note will represent 20 % of the final grade for the course.

Final exam

Final theoretical-practical examination for those who have not passed the subject through the continuous evaluation (100% of the final grade)

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

With this subject there is claimed that students acquire the necessary theoretical and methodological basis for geomorphological analysis: Identify and map morphologies and surface processes, infer the processes and factors involved in their genesis and reconstruct landform evolution.

The subject's program includes the following activities:

-Theoretical sessions. Participative Master Classes. The theoretical sessions will be focused on the presentation of

different landforms and processes.

-Lab sessions. Resolution of problems and analysis of case studies. These practical sessions will start with brief methodological explanations aimed at introducing case studies, to be analyzed by the students using stereoscopes and aerial photographs under the supervision of the lecturer.

-Field practices. The field program will be developed in five journeys (a journey is equivalent to 0.8 ECTS). Different geomorphological landforms and processes will be examined in the field.

5.2.Learning tasks

5.3.Syllabus

I. Introduction to the Geomorphology

- Concept of geomorphology and History of geomorphology
- Basic concepts and theoretical principles

II. Structural geomorphology

- Structural geomorphology and structural landforms
- Geomorphology and plate tectonics
- Igneous and volcanic geomorphology
- Granitic Geomorphology
- Karst geomorphology

III. Geomorphic systems

- Weathering
- Hillslope processes and forms: Introduction, Alluvial fans, Pediments
- Fluvial geomorphology
- Coastal geomorphology

IV. Climatic geomorphology

- Glacial landforms and processes
- Periglacial landforms and processes
- Arid zones landforms and processes
- Tropical landforms and processes
- Geomorphology and Climatic change

III. Applied geomorphology

5.4.Course planning and calendar

The subject will consist of 45 theoretical lessons, 5 fieldtrips, 6 practical lessons and 9 seminars. During the second part of course students have to elaborate a bibliographic research about a subject proposed by the teacher.

The planned schedule is : It is according to approved schedule to be published in the bulletin board of the Department of Geosciences.

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Presentation of exercises: Reports and exercises of practices cabinet will be delivered next week at the beginning of the session.

5.5.Bibliography and recommended resources

BB	Chorley, Richard J.. Geomorphology / Richard J. Chorley, Stanley A. Schumm, David E. Sugden . - 1st ed. London [etc.] : Methuen, 1984
BB	Geomorfología de España / F. Díaz del Olmo... [et al.]; edición coordinada Mateo Gutiérrez Elorza Madrid : Rueda, D.L. 1994
BB	Gutiérrez Elorza, Mateo. Geomorfología / Mateo Gutiérrez Elorza Madrid [etc.] : Pearson Educación, 2008
BB	Gutiérrez Elorza, Mateo. Geomorfología climática / Mateo Gutiérrez Elorza Barcelona : Omega, 2001
BB	Gutiérrez Santolalla, Francisco. Landforms of the earth : an illustrated guide / Francisco Gutiérrez, Mateo Gutiérrez . Switzerland : Springer, cop. 2016
BB	Huggett, Richard John. Fundamentals of geomorphology / Richard John Huggett London : Routledge, 2003
BB	Landscapes and landforms of Spain / Francisco Gutiérrez, Mateo Gutiérrez, editors Dordrecht [etc.] : Springer, [2014]
BB	Selby, M.J.. Earth's changing surface : an introduction to geomorphology / M.J. Selby Oxford : Clarendon Press, 1985
BB	Summerfield, Michael A.. Global geomorphology : an introduction to the study of landforms / Michael A.Summerfield . - 1st ed., 2nd repr. Essex : Longman Scientific and Technical, 1993
BC	Ahnert, Frank. Introduction to Geomorphology / Frank Ahnert London :

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	Arnold, cop. 1996
BC	Arid zone geomorphology : process, from and change in drylands / edited by David S.G. Thomas . - 2nd ed Chichester : John Wiley & Sons, 2000
BC	Benn, Douglas I.. Glaciers & glaciation / Douglas I. Benn and David J.A. Evans London : Arnold, 1998
BC	Bird, Eric. Coastal Geomorphology: An Introduction / Eric Bird. - 2nd ed. Wiley, 2008
BC	Ford, Derek. Karst hydrogeology and geomorphology / Derek Ford and Paul Williams. [Rev. ed.] Chichester, West Sussex, England : John Wiley & Sons, cop. 2007
BC	French, Hugh M.. The periglacial environment / Hugh M. French . 2nd ed. London ; New York : Longman, 1996
BC	French, Hugh. The Periglacial Environment / Hugh French. - 3rd. ed. Wiley, 2007
BC	Geomorphology of desert environments / edited by Athol D. Abrahams and Anthony J. Parsons . - [1st ed.] London [etc.] : Chapman & Hall, 1994
BC	Goudie, A.S.. The Human Impact on the Natural Environment / Andrew S. Goudie. - 6ª. ed. Wiley-Blackwell, 2005
BC	Knighton, David. Fluvial Forms and Processes : A New Perspective London : Arnold, 1998
BC	Lancaster, N.. Geomorphology of desert dunes / Nicholas Lancaster London ;|aNew York : Routledge, 1995
BC	Livingstone, Ian. Aeolian Geomorphology: An Introduction / Ian Livingstone. - 1st. ed. Essex : Prentice Hall, 1996

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BC	Morisawa, Marie. Rivers: Form and Process / Marie Morisawa. London : Longman Higher Education, 1985
BC	Ollier, Cliff. Tectonics and landforms / Cliff Ollier ; edited by K.M. Clayton . - [1st publ.] New York [etc.] : Longman, 1981
BC	Ollier, Cliff. Volcanoes / Cliff Ollier. Blackwell, 1988
BC	Selby, M. J.. Hillslope Materials and Processes / M. J. Shelby. 2nd. ed. Oxford : Oxford University Press, 1993
BC	Strahler, Alan. Introducing physical geography / Alan Strahler, Arthur Strahler. . 5th ed. New York : Wiley, cop. 2011
BC	Sweeting, Marjorie M.. Karst landforms / Marjorie M. Sweeting . - [1st publ.] London [etc.] : Macmillan, 1972
BC	Thomas, Michael F.. Geomorphology in the tropics : a study of weathering and denudation in low latitudes / Michael F. Thomas Chichester [etc.] : John Wiley & Sons, cop.1994
BC	Washburn, A.L.. Geocryology : a survey of periglacial processes and environments / A.L. Washburn . [2nd ed.] London : Edward Arnold, cop. 1979
BC	Young, Anthony. Slopes / Anthony Young . [2nd impr.] London [etc.] : Longman, 1975