Universitat Autònoma de Barcelona

2023/2024

Current Geological Areas

Code: 101071
ECTS Credits: 4

Degree	Type	Year	Semester
2500254 Geology	OT	3	1
2500254 Geology	OT	4	1

Contact

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Teaching groups languages

You can check it through this link. To consult the language you will need to enter the CODE of the subject.
Please note that this information is provisional until 30 November 2023.

Prerequisites

It is recommended to have basic knowledge in Stratigraphy, Sedimentology and a good level of comprehension of writings in English.

Objectives and Contextualisation

The course Present Geological Environments provides the fundamental formation in a field of sedimentary geolo

This branch of Stratigraphy and Sedimentology, which can also be understood as a branch of Applied Sedimento
The course wants wants the student to go beyond the knowledge that ha

The course addresses the relationship between Geology and the Environment and seeks to ensure that the stude

Competences

Geology

- Display understanding of the size of the space and time dimensions of Earth processes, on different scales.

Learning Outcomes

1. Apply Geochemistry concepts to solve problems of land and water pollution.
2. Assess changes to geological environments and their level of degradation resulting from direct anthropogenic action or climate change.

Content

1-Introduction: Concept and scope of environmental sedimentology. Factors of uniqueness of current media with

2-Coastal environment: Sedimentary processes, control factors and interaction with anthropic activity.

3-Lacustrine environment: Types of lakes and lacustrine sediments. Lake pollution. Processes and impacts of na

4-Mountain environment Types of mountain environments. Environmental sedimentological characteristics. Inter

5-Desert environment Sedimentary processes and their impacts. Aridification and anthropogenic impacts.

6-Fluvial environment Sedimentary processes and impact of anthropogenic activity.

7-Urban environment Geology-city interaction: the case of a large city.

Methodology

Three types of activities will be carried out: (a) mentoring, (b) supervised and (c) autonomous

Directed activities
Theoretical lessons. Master classes of the subjects by the teachers
Practices: Sediment analysis of some current environment. Case studies

Supervised activities:
A proposed real case which the student develops on the basis of bibliogr

Autonomous activities
In addition to the study of conceptual issues, the student must complete t

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Practices	16	0.64	1, 2
Theoretical lessons	18	0.72	1, 2
Type: Supervised			
Report on a study case	9	0.36	1, 2
Type: Autonomous			
Theory study, Report performance	45	1.8	1, 2

Assessment

Evaluation

Evaluation of the theoretical contents according to the score obtained in
Evaluation of the practices. Attendance is taken into account, together wi
Evaluation of a study case. Accounts for the 40% of the final score. The

Final recovery test
Fail partial theoretical tests (score less than 5) may be recovered in a fina

There will be no tests (partial, recovery or synthesis) other than in the scl

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Evaluation of theoretical contents	40	4	0.16	1, 2
Practices evaluation	20	0	0	1, 2
Report on a sedimentary environment	40	8	0.32	1, 2

Bibliography

Arche, A. (2010). Sedimentología: del proceso físico a la cuenca sedimentaria. Publicaciones del Consejo Superior de Investigaciones Científicas; Colección Textos universitarios, Ref. CSIC 11761, 1287p

Lovejoy, T.E. & hannah, L. (2005). Climate Change and Biodiversity. Yale University Press.

Perry, C.T. and Taylor. K.G. (2007). Environmental Sedimentology, (C. Perry and K.G. Taylor, eds.) Blackwell Scientific Publications.

Solomon, S., Quin, D., Manning, M., Marquis, M., Averyt, k., Tichnor, M. Lery-Miller, H. Eds. (2008). Climate Change . CAmbridge University Press.The Physical Science Basis. Working Group I to the 4th assesment report of the Intergornmental Pannel on Climate Change.

Walker, R. (1984). Facies models. Geosciences Canada, Reprint Series 1 (2nd. Ed. Revised). Geol. Assoc. Canada, 317 pp.

A list with references will be uploaded in Campus Virtual. Students will search for these references to build up a report on them.

Software

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