



IDENTIFYING DATA

Geological Oceanography

Subject	Geological Oceanography			
Code	V10M153V01CF104			
Study programme	Máster Universitario en Oceanografía			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	3	Optional	1st	1st
Teaching language	#EnglishFriendly Spanish			
Department				
Coordinator	Alejo Flores, Irene			
Lecturers	Alejo Flores, Irene Francés Pedraz, Guillermo García Gil, María Soledad Nombela Castaño, Miguel Angel			
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Web	http://masteroceanografia.com/			
General description	It is a complement formative that they will have to follow the students that do not proceed of the degree in Marine Sciences. The Educational Commission of the Master will study for each case, in sight of the training and previous experience of each student, the need of follow this subject.			

English Friendly subject: International students may request from the teachers:

a) resources and bibliographic references in English, b) tutoring sessions in English, c) exams and assessments in English.

Training and Learning Results

Code	
A1	Students who have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with the first cycle, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context
A5	Students who have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.
B1	The students will understand in a detailed and based form the theoretical and practical aspects and the work methodology of the oceanography
D1	The students will know and will be able to apply the scientific method in the academic and research fields.
D4	The students will be able to understand the need and obligation to perform a continuous training, to a large extent autonomous, for the scientific development, updating the knowledges, skills and attitudes of the professional competences along the life.

Expected results from this subject

Expected results from this subject	Training and Learning Results
Purchase basic knowledges to understand the internal and external geological cycles in the frame of the Plate Tectonic.	A1 B1 D1
Capacity to take consciousness of the different scales space-temporary in which the geological processes operate in the field of the geological oceanography.	A1 A5 B1 D4
Understand the importance for the human being of the geological processes and products in the field of the marine geology.	A5 B1 D1 D4

Contents	
Topic	
The System Tierra	The Earth like dynamic system. Fundamental principles of the geology and concept of geological time. The geological cycle. Sources of energy of the internal system and of the external system. Scale space-temporary of the terrestrial processes.
Introduction to the Tectonics of Plates.	It derives it continental and the oceanic expansion. Active continental margins and passive. Edges of plate: convergent, divergent and *transcurrentes. The cycle of Wilson. Tectonics and climate: *ciclicidad of the processes in the geological register
Basic concepts of sedimentology	Fundamental principles. Structures *sedimentarias. *Facies And analysis of *facies
Coastal and marine sedimentary environments	Processes and products. Sedimentary Environments.
Seismic surveys at sea	- The seismic method - Seismic interpretation
Practical subjects	1. Introduction to the map and geological cut 2. Basic technicians in sedimentology

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	18	31.5	49.5
Laboratory practical	9	11.25	20.25
Seminars	3	2.25	5.25

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Lecturing	The main concepts of each topic will be explained by the teacher and the students will be involved by asking questions. Attendance and active participation in the sessions will be valued.
Laboratory practical	Resolution of maps and simple geological sections. Use of basic techniques in sedimentology. Recognition of visu of the main groups of rocks. Given their experimental nature, attendance at them is MANDATORY.
Seminars	The students will present in small groups doubts that will be solved by the teacher and the rest of the students of the group.

Personalized assistance

Methodologies	Description
Lecturing	The students can be personally assisted both in the development of the lectures and in the hours of individual tutoring reserved for that purpose.
Laboratory practical	The students can be personally attended both in the development of laboratory practices and in the hours of individual tutoring reserved for that purpose.
Seminars	Students can be personally attended both in the development of group tutoring and in the individual tutoring hours reserved for this purpose.

Assessment

	Description	Qualification	Training and Learning Results		
Lecturing	It will be evaluated in 2 blocks: 20%, attendance at the sessions and active participation in them. 40%, evaluation of the knowledge acquired through a written test.	60	A1 A5	B1	D1 D4
Laboratory practical	For each one of the practices the students will have to present a memory that will be evaluated. Attendance is mandatory, given its experimental nature.	40	A5	B1	D4

Other comments on the Evaluation

Global assessment option

The application for this evaluation option must be submitted in the time and manner determined by the Center,

which will be published prior to the academic start.

Given the experimental nature of the internships, attendance at them is mandatory to be eligible for this evaluation option.

Failure to attend the practices, without just cause invalidates this possibility, as well as the opportunity for extraordinary evaluation (2nd opportunity).

Extraordinary evaluation (2nd chance)

Global exam in which 60% will correspond to the theoretical contents and 40% of the practical ones.

Other considerations

The official dates of evaluation tests will be available at:
<http://mastroceanografia.com/horarios/>

Students who study this subject are responsible and honest behavior. Any form of fraud (copy or plagiarism) aimed at distorting the level of knowledge and skills reached in any type of test, report or work will be considered inadmissible. Fraudulent behaviors may involve suspending the subject during a full course. An internal record of these proceedings will be kept so that, in case of recidivism, request the opening of a disciplinary file to the Rectorate.

Sources of information

Basic Bibliography

Leeder, M.R., Pérez Arlucea, M., **Physical processes in Earth and Environmental Sciences**, Blackwell Publishing, 321 pp.,

Tarback, E.J., Lutgens, F.K., **Ciencias de la Tierra. Una introducción a la Geología Física**, 10th Edition. Prentice Hall. Madrid. 710 pp.,

McQuillin, R., Bacon, M., Barclay, W., **An Introduction to seismic interpretation**, Grahah & Trotman, 287 pp.,

Davidson-Arnott, R., **Introduction to Coastal Processes and Geomorphology**, Cambridge University Press. 422.,

Complementary Bibliography

Reolid, M., **La Tierra un lugar privilegiado para la vida**, Aula Magna Magrav Gil, 298 pp.,

Recommendations

Other comments

Students willing so could attend personal tutorials to solve doubts and/or uncertainties. To better optimise the procedure, the student is requested to previously contact his/her teacher with reasonable anticipation. Students are strongly requested to fulfil a honest and responsible behaviour. It is considered completely unacceptable any alteration or fraud (i.e., copy or plagiarism) contributing to modify the level of knowledge and abilities acquired in exams, evaluations, reports or any kind of teacher's proposed work. Fraudulent behaviour may cause failing the course for a whole academic year. An internal dossier of these activities will be built and, when reoffending, the university rectorate will be asked to open a disciplinary record.
