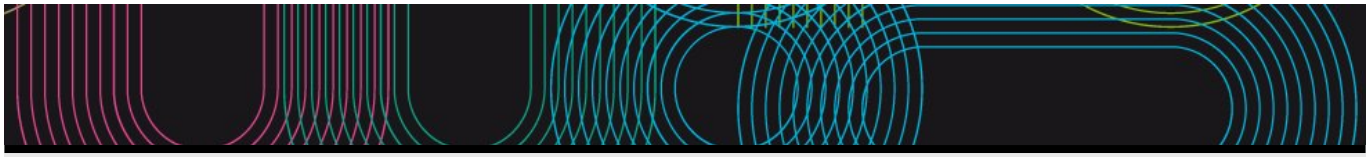

IDENTIFYING DATA				
Geology: Geology 2				
Subject	Geology: Geology 2			
Code	V10G061V01108			
Study programme	Grado en Ciencias del Mar			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Basic education	1st	2nd
Teaching language	#EnglishFriendly Spanish			
Department				
Coordinator	Diz Ferreiro, Paula			
Lecturers	Alejo Flores, Irene Diz Ferreiro, Paula Gago Duport, Luís Carlos Nombela Castaño, Miguel Angel Pérez Arlucea, Marta María			
E-mail	pauladiz@uvigo.es			
Web	http://https://mar.uvigo.es/			
General description	Geology II is a theoretical and practical subject that integrates the action and the results of the external geological processes on the rocks and sediments that constitute the surface of the Earth. Matter of the program English Friendly: The international students can request material and bibliographic references for the follow-up of the subject in English, personal tuition and written examination will be given in English.			

Training and Learning Results	
Code	
A1	Students have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study
A5	Students have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy
B1	Know and use vocabulary, concepts, principles and theories related to oceanography and apply everything learned in a professional and/or research environment.
B4	Manage, process and interpret the data and information obtained both in the field and in the laboratory.
C1	know at a general level the fundamental principles of sciences: Mathematics, Physics, Chemistry, Biology and Geology.
C12	Acquire knowledge about processes and products related to internal and external geological cycles.
D1	Develop the search, analysis and synthesis of information skills oriented to the identification and resolution of problems.
D5	Sustainability and environmental commitment. Equitable, responsible and efficient use of resources.

Expected results from this subject	Training and Learning Results			
Identify the main mineral constituents and biological in sediments and sedimentary rocks by observations "de visu" in field and laboratory.	A1	B1	C1	D1
Know and differentiate the external geological agents and their effects.	A5		C1 C12	
Recognize the relief forms		B1		
Handle the systems of cartographycal maps		B4		
Handle the principles and the basic instruments of positioning and georeference	A1	B4	C12	D1
Look for and handle specific information.	A5			D1 D5

Contents	
Topic	
0: PRESENTATION	Presentation of the subject. General explanation of theoretical contents-practical and evaluation system.
1: INTRODUCTION	The external geological cycle.
2: THE ATMOSPHERE AND THE HIDROSPHERA	Atmosphere: origin, composition, structure and dynamicS. Oceanic waters and its circulation. Continental waters: the hydrological cycle.
3: METEORIZATION, SOILS AND SEDIMENTARY ROCKS	Meteorization and erosion, types and velocities. Soil formation and soil types. Formation and classification of sediments and sedimentary rocks. Diagenesis
4: THE CONTINENTAL ZONES	Geological processes in glacial environments geological Processes in desert environments Geological processes in fluvial environments Geological processes in lacustrine environments.
5: THE COASTAL ZONE	Terminology associated to the coastal zone. Coastal environments. Morfodynamics.
6: THE CONTINENTAL SHELF AND THE OCEANIC BASINS	Morphology and distribution of marine floors. The continental shelf Reefs The continental slope The deep ocean floor (abyssal basins and mid ocean ridges)
7: GRAVITATIONAL PROCESSES	Gravitational processes in emerged and underwater areas.
SEMINARS	Seminar 1: Clocks in rocks. Seminar 2: ¿What does the Earth do with the CO2?. Seminar 3: Processes of meteorización in rocks.
PRACTICALS	Practical 1: Drawing geological sections. Practical 2:Analysis of maps and geological sections. Calculations dip and strike and thicknesses of layers. Unconformities Practical 3: Space representation in geology: contour maps of marine sediment thickness. Practical 4: Identification of sedimentary rocks. Calculation of the CaCO3 content of marine sediments.
STUDIES EXCURSION	Geological inspection in the itinerary Ramallosa-Baiona to examine the control that exerts the geology, the marine and fluvial dynamics in coastal geomorphology. Identificacion of human impact on the coast

Planning			
	Class hours	Hours outside the classroom	Total hours
Laboratory practical	12	20	32
Seminars	7	15	22
Studies excursion	6	4	10
Lecturing	19	40	59
Report of practices, practicum and external practices	0	12	12
Essay questions exam	2	0	2
Problem and/or exercise solving	1	0	1
Report of practices, practicum and external practices	0	11	11
Report of practices, practicum and external practices	0	1	1
*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.			

Methodologies	
	Description

Laboratory practical	Given the experimental nature of the practicals, attendance is mandatory. Practical 1: Drawing geological sections. Practical 2:Analysis of maps and geological sections. Calculations dip and strike and thicknesses of layers. Unconformities Practical 3: Space representation in geology: contour maps of marine sediment thickness. Practical 4: Identification of sedimentary rocks. Calculation of the CaCO3 content of marine sediments.
Seminars	Given the experimental nature of the seminars, attendance is mandatory. Seminar 1: Clocks in rocks. Seminar 2: ¿What does the Earth do with the CO2?. Seminar 3: Processes of meteorización in rocks.
Studies excursion	Geological evaluation of the itinerary Ramallosa-Baiona to examine the control that exerts the geology, the marine and fluvial dynamics in coastal geomorphology. Identificatiion of human impact on the coast.
Lecturing	Lectures are focused on theoretical contents external geology. Students are encouraged to participate and raise question. Participation will be a plus in the final evaluation of the student.

Personalized assistance

Methodologies	Description
Seminars	The students are encouraged to formulate questions during the development of the seminars. For supplementary tuition, students are required to email the lecturer in advance.
Studies excursion	The students will receive tuition during the development of the studies excursion.
Lecturing	The students are encouraged to formulate questions during the development of the lectures. For supplementary tuition, students are required to email the lecturer in advance.
Laboratory practical	The students are encouraged to formulate questions during the development of the practicas. For supplementary tuition, students are required to email the lecturer in advance.
Tests	**Description**
Report of practices, practicum and external practices	For supplementary tuition regarding the report of practices, students are required to email the lecturer in advance.
Essay questions exam	For supplementary tuition regarding the essay questions exam, students are required to email the lecturer in advance.
Problem and/or exercise solving	Questions raised by students will be solved during lectures.
Report of practices, practicum and external practices	For supplementary tuition regarding the report of seminars, students are required to email the lecturer in advance.
Report of practices, practicum and external practices	Students will be able to formulate specific questions regarding the report of the excursion during the excursion itself

Assessment

	Description	Qualification	Training and Learning Results			
Laboratory practical	Given its experimental character, the assistance to the practical is compulsory.	0		B1 B4	C1 C12	D1
Seminars	Given its experimental character, the assistance to the seminars is compulsory.	0	A1	B1	C1	D5
Studies excursion	Given its experimental character, the assistance to the the excursion is compulsory.	0	A1 A5	B1 B4	C12	D5

Report of practices, practicum and external practices	It requires handing in a report or problem solving exercices in each one of the 4 practicals. It will be evaluated the contents, and the quality of the reports, etc, of each one of the 4 practicals programmed for the subject. Given the compulsory and face-to-face character, reports of non-attendees will not be taken into account.	30	A1	B4	C1 C12	D1
Essay questions exam	The exam will contain specific questions about the contents developed during lectures.	30	A1 A5	B1	C1 C12	
Problem and/or exercise solving	This is a short (10-15 minutes) questionaraire about any theoretical contents explained previously during lectures. It will take place three times during lectures. The dates are indicated in timeline.	10		B1 B4	C12	
Report of practices, practicum and external practices	It requires handing in a report or problem solving exercices in each one of the 3 seminars. It will be evaluated the contents, and the quality of the reports, etc, of each one of the 3 seminars programmed for the subject. Given the compulsory and face-to-face character, reports of non-attendees will not be taken into account.	20	A1	B1 B4	C1 C12	
Report of practices, practicum and external practices	It requires handing in a report or questionnaire about the studies excursion. Given the compulsory and face-to-face character, reports of non-attendees will not be taken into account.	10	A1 A5	B1 B4	C12	D5

Other comments on the Evaluation

FIRST OPPORTUNITY ASSESSMENT:

The students that have not attended all sesions of practicals, seminars and the studies excursion (except for justified reasons, see regulation*) will not be evaluated, either by continuous or global options.

The final score will be the sum of the mark obtained in each one of the tests as long as they are marked 4 over 10 in seminars, practicals and the essay questions exam. In case they do not reach 4/10 in any of these three test, the final score will be multiplied by 0.5.

SECOND OPPORTUNITY ASSESSMENT:

In the case failing the first opportunity, the assessment in the second opportunity will be a theorical-practical test accounting for 100% of the final mark.

GLOBAL ASSEMMENT OPTION: The application for thisevaluation option must be submitted in the time and manner determined by theCenter, which will be published prior to the academic start. However, it can only be requested if attendance at all mandatory activities is fulfilled (practicals, seminars and the studies excursion) unless adequate justificaction is provided. The global assessment will be a theorical-practical test accounting for 100% of the final mark.

GENERAL CONSIDERATIONS

It is expected the students to behave respectfully and honestly.

It inadmissible any form of fraud (copy and/or plagiarism) to fake the level of knowledge or skills reached by the student in any type of proof, report or work. The fraudulent behaviours entail failing the subject during the whole year.

The use of mobile phones for purposes other than educational, is not allowed during the duration of classroom activities.

Communication by e-mail between students and lecturers must be done using only the institutional e-mail (@alumnos.uvigo.gal). Likewise, this e-mail is the one that must appear in moovi. *See REGULATIONS

*See Regulation: REGULAMENTO SOBRE A AVALIACIÓN, A CALIFICACIÓN E A CALIDADE DA DOCENCIA E DO PROCESO DE APRENDIZAXE DO ESTUDANTADO (Aprobado no claustro do 18 de abril de 2023)

The date, hour and place of the evaluable activities will be published in the official web of the Faculty of Marine Sciences: http://mar.uvigo.es/index.php/es/alumnado/examenes/

Sources of information

Basic Bibliography

Anguita, F y Moreno, F., **Procesos Geológicos Externos y Geología Ambiental**, Rueda,

Tarbuck, E.J. y Lutgens, F.K, **Ciencias de la Tierra. Una introducción a la geología física. 8ª ed.**, Pearson,

Wicander and Monroe, **Geology, Earth in Perspective**, Cengage,

Coastal Geology, Springer, 2022

River Dynamics, Cambridge University Press, 2020

Complementary Bibliography

Geomorphology of Desert Dunes, Cambridge University Press, 2023

Recommendations

Subjects that continue the syllabus

Coastal and marine sedimentary habitats/V10G061V01207

Subjects that it is recommended to have taken before

Geology: Geology 1/V10G061V01103