



## IDENTIFYING DATA

### Geology: Geology 1

Subject	Geology: Geology 1			
Code	V10G061V01103			
Study programme	(*)Grao en Ciencias do Mar			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Basic education	1st	1st
Teaching language	Spanish			
Department				
Coordinator	Nombela Castaño, Miguel Angel			
Lecturers	Alejo Flores, Irene López Pérez, Ángel Enrique Nombela Castaño, Miguel Angel Pérez Arlucea, Marta María			
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General description	The Geology I (Internal Geology) pretends that the student purchase in the second semester of the 1st course of the Degree of Marine Sciences, the knowledges on the appearances related with the structure and internal composition of the Earth, as well as of the internal processes, with an approach from the field of the Plates Tectonics and the Marine Geology.			

## Competencies

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
A2	Students can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study
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.
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.

## Learning outcomes

Expected results from this subject	Training and Learning Results			
New	A2	B1		
2. Know and relate the internal processes with the tectonic of plates.	A1	B4	C12	
3. Recognize tectonic structures and the processes that generate them.	A1	B4	C12	
4. Handle of deformation structures representation systems.		B1		D5
		B4		
5. Interpretation of geological maps.	A2	B1		D1
		B4		D5
6. Identify the main mineral and igneous and metamorphic rocks.	A1		C12	D1
				D5
7. Skill in the management of the geological information related with the internal geological processes, capacity of synthesis and to work in a team.	A1	B4	C12	D1
				D5

<b>Contents</b>		
Topic		
Presentation Geology II	The sub-topics correspond with the topics.	
Subject 1. Introduction	The subtemes correspond with the subjects.	
Subject 2. Structure of the Earth and his materials: minerals and rocks	The sub-topics correspond with the topics.	
Subject 3. Units of the Terrestrial Relief-Deep Ocean: types of margins	The sub-topics correspond with the topics.	
Subject 4. Earth Surface Deformación: faults and folds	The sub-topics correspond with the topics.	
Subject 5. Plate Tectonics: introduction and mechanisms	The sub-topics correspond with the topics.	
Subject 7. Metamorphism, metasomatism, metamorphic rocks and Plates Tectonic	The sub-topics correspond with the topics.	
Subject 8. Magmatism, Igneous rocks and Plates Tectonic	The sub-topics correspond with the topics.	
Subject 9. Vulcanism and Plates Tectonic	The sub-topics correspond with the topics.	
Subject 9. Seismicity and Tectonic of Plates	The sub-topics correspond with the topics.	
Subject 10. Synthesis: Economic and environmental implications of the internal geological system.	The sub-topics correspond with the topics.	

<b>Planning</b>			
	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0.75	1.75
Lecturing	18	36	54
Seminars	6	24	30
Laboratory practical	13	22.75	35.75
Studies excursion	4.5	9	13.5
Problem and/or exercise solving	1	4	5
Laboratory practice	2	3.5	5.5
Report of practices, practicum and external practices	0.5	1	1.5
Objective questions exam	1	2	3
*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.			

<b>Methodologies</b>	
	Description
Introductory activities	It will present him to the student the way in which they will give the classes, the form of evaluation, the exits of field, the practical classes and the seminars. It will deliver the topics, as well as the necessary material for the practical classes and seminars.
Lecturing	They will expose him to the student the theoretical contents that they will be evaluated in a final examination.
Seminars	It will use the stereographic projection to represent data of geological structures. Practical works on faults. They will familiarise with the keys of identification of minerals.
Laboratory practical	They will learn to handle with topographical maps and to order in the time the rocks and geological processes from geological courts. Besides, the student will learn to recognise the minerals and the types of igneous and metamorphic rocks more common in the nature.
Studies excursion	The student will learn to handle the geological compass, recognise rocks and geological structures in the field, his implications in the internal processes, and his consequences applied.

<b>Personalized assistance</b>	
Methodologies	Description
Lecturing	The student will be able to be attended so much during Master sessionss, if it does not affect of sensitive way in the development of the same, and in the hours of tutorías (Monday, Tuesday and Wednesday of 12:00 to 14:00). To optimise the time, is necessary that the students contact with the professor with enough time.
Introductory activities	The student will be able to be attended during the introductory activities, if it does not affect of sensitive way in the development of the same, and in hours of tutorías (Monday, Tuesday and Wednesday of 12:00 to 14:00). To optimise the time, is necessary that the students contact with the professor with enough time.

Seminars	The student will be able to be attended so much during the seminars, if it does not affect of sensitive way in the development of the same, and in hours of tutorías (Monday, Tuesday and Wednesday of 12:00 to 14:00). To optimise the time, is necessary that the students contact with the professor with enough time.
Laboratory practical	The student will be able to be attended so much during Laboratory practises, if it does not affect of sensitive way in the development of the same, and in hours of tutorías (Monday, Tuesday and Wednesday of 12:00 to 14:00). To optimise the time, is necessary that the students contact with the professor with enough time.
Studies excursion	The student will be able to be attended so much during field practices, if it does not affect of sensitive way in the development of the same, how in hours of tutorías (Monday, Tuesday and Wednesday of 12:00 to 14:00). To optimize the time, is necessary that students contact with the professor with enough time.
<b>Tests</b>	<b>Description</b>
Problem and/or exercise solving	The student will be able to be attended so much during the seminars, if it does not affect of sensitive way in the development of the same, and in hours of tutorías (Monday, Tuesday and Wednesday of 12:00 to 14:00). To optimise the time, is necessary that the students contact with the professor with enough time.
Laboratory practice	The student will be able to be attended so much during Laboratory practises, if it does not affect of sensitive way in the development of the same, and in hours of tutorías (Monday, Tuesday and Wednesday of 12:00 to 14:00). To optimise the time, is necessary that the students contact with the professor with enough time.
Report of practices, practicum and external practices	The student will be able to be attended so much during field practices, if it does not affect of sensitive way in the development of the same, how in hours of tutorías (Monday, Tuesday and Wednesday of 12:00 to 14:00). To optimize the time, is necessary that students contact with the professor with enough time.
Objective questions exam	The student will be able to be attended so much during Master sessionss, if it does not affect of sensitive way in the development of the same, and in the hours of tutorías (Monday, Tuesday and Wednesday of 12:00 to 14:00). To optimise the time, is necessary that the students contact with the professor with enough time.

<b>Assessment</b>					
	Description	Qualification	Training and Learning Results		
Problem and/or exercise solving	The assistance to seminars is compulsory. It will evaluate so much the quality of the deliverables like the attitude (participation, implication, etc.)	8	A1 A2		D1 D5
Laboratory practice	The assistance to laboratory practices is compulsory. It will evaluate so much the quality of the deliverables like the attitude (participation, implication, etc.)	15	A2	B1 B4	D1
Report of practices, practicum and external practices	The assistance to studies excursion is compulsory. It will evaluate so much the quality of the deliverables like the attitude (participation, implication, etc.)	7	A2	B1 B4	C12
Objective questions exam	They will evaluate the contents with short questions and/or ask false/true type. To be able to add the rest of proofd, in the exam has to have at least a 3.5/10	70	A1	B1 B4	C12 D5

### Other comments on the Evaluation

The students of the 3rd Age University Program that choose this subject inside the cycle of Integration to be able to it surpass will have to assist at least to 80% of the lectures as well as at least to 80% of the rest of the methodologies employed (seminars, practices of laboratory and field trip). On the other hand it will value the level of integration with the students of the degree.

Date, time and place of exams will be published in the official web of Marien Sciencies Faculty:

<http://mar.uvigo.es/index.php/en/alumnado-actual-2/examenes-3>

*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*

## Sources of information

### Basic Bibliography

Tarback, E.J., Lutgens, F.K., **Ciencias de la Tierra. Una introducción a la Geología Física**, 10th Edition 2013,

### Complementary Bibliography

Anguita, F., Moreno, F., **Procesos Geológicos Internos**, Editorial Rueda., 232 pp,

Azañón, J.M., Azor, A., Alonso, F.M., Orozco, M., **Geología Física**, Paraninfo & Thomson Learning, 302 pp,

Davies, G. H., Reynolds, S.J., **Structural Geology, of rocks and regions**, 3rd Edition. John Wiley and Sons, Inc, New York, 776 pp,

Kearey, P., Vine, F., **Global Tectonics**, 3rd Edition. Blackwell Science, 333 pp,

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

Monroe, J.S., Wicander, R., Pozo, M., **Geología Dinámica y evolución de la Tierra**, Ed. Paraninfo, Madrid,

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

Wicander, R., Monroe, J.S., **Historical Geology. Evolution of Earth and Life Through Time**, 7th Edition. Edit.Brooks/Cole, 580 pp,

## Recommendations

## Contingency plan

### Description

=== EXCEPTIONAL PLANNING ===

Given the uncertain and unpredictable evolution of the health alert caused by COVID-19, the University of Vigo establishes an extraordinary planning that will be activated when the administrations and the institution itself determine it, considering safety, health and responsibility criteria both in distance and blended learning. These already planned measures guarantee, at the required time, the development of teaching in a more agile and effective way, as it is known in advance (or well in advance) by the students and teachers through the standardized tool.

=== ADAPTATION OF THE METHODOLOGIES ===

\* Teaching methodologies maintained

- 1.- Mixed teaching: they keep
- 2.- Teaching no face-to-face: they will adapt to the available resources.

\* Teaching methodologies modified

- 1.- Mixed teaching: they do not modify
- 2.- Teaching no face-to-face: the seminars, practices of laboratory and field excursions will treat of virtualize the most possible. Likewise it will propose activities that stimulate his self learning.

\* Non-attendance mechanisms for student attention (tutoring)

- 1.- Mixed teaching: previous concertation by email, face-to-face and/or virtual through Remote Campus.
- 2.- Teaching no face-to-face: previous concertationn by email, virtual through Remote Campus

\* Modifications (if applicable) of the contents

- 1.- Mixed teaching: it does not have intention to change the contents
- 2.- Teaching no face-to-face: it does not have intention to change the contained

\* Additional bibliography to facilitate self-learning

Is not necessary

\* Other modifications

=== ADAPTATION OF THE TESTS ===

\* Tests already carried out

Test XX: [Previous Weight 00%] [Proposed Weight 00%]

- 1.- Mixed teaching: they conserve the weights of the face-to-face situation.
- 2.- Teaching no face-to-face: Seminars (08%)/(15%); Practical Laboratory (15%)/(20%); Field excursion (07%)/(15%); Examan (70%)/(50%)

\* Pending tests that are maintained

Test XX: [Previous Weight 00%] [Proposed Weight 00%]

...

\* Tests that are modified

[Previous test] => [New test]

1.- Mixed teaching: they do not modify

2.- Teaching no face-to-face: face-to-face examination ==> virtual examination with Fatic and Remote Campus.

\* New tests

\* Additional Information

During the no face-to-face teaching, requires of the students that, in these exceptional circumstances, face this matter with a responsible and honest behaviour. It will consider inadmissible any form of copy directed to false the level of knowledges and skills reached in the preparation of the homeworks, as well as during the virtual examination. If there is some suspicion of some type of fraudulent behaviour, will be able to subject to the students to an additional control to check his veracity.

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