University of Gdańsk

Subject card

Subject name and code	Sea floor geology - laboratory classes, PG_00193081		
Field of study	Geology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	4	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Marine Geology -> Department of Chemical Oceanography and Marine Geology -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Ewa Szymczak	
	Teachers		

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	0.0	0.0	30
	E-learning hours included: 0.0						

Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
	Number of study hours	30	3.0	17.0	50

Subject objectives	To learn and understand the processes that determine the evolution of the oceans, the geological structure of the oceanic crust, the morphological structure of the bottom and the types of bottom sediments and the patterns of their occurrence. The Baltic Sea as an example of an epicontinental sea.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOLL3_W01] knows and understands the basic natural phenomena and explains their course in relation to geological processes	characterises the relationship between physical, chemical and biological processes with the geological processes taking place within the oceanic crust (including sedimentary cover) and in the marine environment	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW3] text preparation/written work [SW5] implementation of a problem task
[GEOLL3_U10] is able to work individually and cooperate in laboratory and field groups performing various functions in them and performing various tasks	works individually and collaboratively in a group to plan and carry out assigned tasks in a timely manner, feels responsible for their correctness and results	[SU2] presentation/project/paper/ report [SU8] observation of student's independent or team work
[GEOLL3_W04] knows and understands phenomena and processes occurring in the past and today in the interior of the Earth and on its surface, defines the methods of how to study them	identifies the geological processes related to the evolution of the seas and oceans, defines the methods to study them and reconstruct the history of geological evolutions	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
[GEOLL3_U05] can reconstruct the history of geological development of selected regions in Poland and in the world on the basis of maps, cross-sections and exposures in the field	is able to use source materials (maps, diagrams, cross-sections) to correctly describe the morphology and characteristics of the sea floor, sediments and to reconstruct the sequence of geological processes	[SU3] text preparation/written work [SU5] implementation of a problem task [SU8] observation of student's independent or team work
[GEOLL3_U02] has the skill of analytical and synthetic way of reasoning leading to correct inference based on the results obtained or the facts presented	analyses the causes, course and effects of geological processes on the basis of his knowledge and the results obtained or facts presented	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU4] test/exam - oral or written

Subject contents

Morphological units of the world ocean floor. Bathymetric profile. Relationship of plate tectonics to the development and morphology of the ocean floor. Geological processes at lithosphere plate boundaries. Seismicity and volcanism in the world ocean. Ocean floor sediments - sediment identification based on data from the ocean drilling programme. Outline of the genesis and development of the Baltic Sea.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
assessments of partial assignments	51.0%	40.0%
written assessment	51.0%	60.0%

Recommended reading

Basic literature	Witak M., 2013. Outline of the postglacial evolution of the Southern Baltic. [in:] J. Cyberski (Ed.), Coastal protection in state maritime policy. Uścinowicz Sz., Kramarska R., 2011. Geological structure and bottom sediments of the Baltic Sea, [in:] Geochemistry of Baltic Sea surface sediments, Sz. Uścinowicz (red.), PIG-BIP
Supplementary literature	Kearey P., Klepeis K.A., Vine F.J., 2009. Global tectonics, Wiley-Blackwell Kent C. Condie, 2003. Plate Tectonics and Crustal Evolution. Butterworth-Heinemann Larter R.D., Leat P.T., 2003. Intra-Oceanic subduction systems, The Geological Society London Yuen, D.A., Maruyama, S., Karato, S.-i., Windley, B.F. (Eds.), 2007, Superplumes:Beyond Plate Tectonics, Springer Sarle R., 2013. Mid-Ocean Ridges. University Printing House, Cambridge
eResources addresses	

Example issues/ example questions/ tasks being completed	Identify the types of triple-junction that occur between plates in the Pacific. Explain the reasons for the differential distribution of sediments in the Pacific and Atlantic ocean basins.
Work placement	Not applicable

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