

Subject card

Subject name and code	Marine geology - lecture, PG_00103328						
Field of study	Oceanography						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2024/2025		
Education level	undergraduate studies	Subject group			Obligatory subject group in the field of study		
Mode of study	full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			3.0		
Learning profile	academic	Assessment form					
Conducting unit	Pracownia Geologii Morza -> Katedra Oceanografii Chemicznej i Geologii Morza -> Faculty of Oceanography and Geography						
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	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
	Additional information: lecture with multimedia presentationlecture with discussion						
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		5.0		31.0	66
Subject objectives	The aim of the course is to learn and understand the geological processes responsible for the evolution of the oceans and the geological structure of the oceanic crust, the morphological structure of the world ocean floor and the types of bottom sediments and their patterns of occurrence. Students will also learn about the methods of ocean floor exploration, the scientific programmes under which oceanic crust research is carried out and the major achievements of the ocean drilling programme. The post-glacial evolution of the Baltic Sea will be presented.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	OCEANL3-U04	is able to search independently for information in Polish and literature in Polish and English, as well as in the Internet and in databases, to describe correctly the morphology and characteristics of the seabed, sediments and the course of geological processes	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
	OCEANL3-U06	is able to define relationships concerning the functioning of individual components of the marine environment with particular emphasis on geological processes, integrating knowledge from various fields and scientific disciplines	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
	OCEANL3-W02	know and understand geological processes and the phenomena accompanying them physical, biological, chemical phenomena occurring within the oceanic crust and in the marine environment	[SW1] oral statement/conversation/discussion [SW3] text preparation/written work
	OCEANL3-W01	has an advanced knowledge and understanding of the terminology used in marine geology and used to describe geological processes in the seas and oceans	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
	OCEANL3-W05	has an advanced understanding of the techniques, research methods and tools used in geological surveys of the seabed	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
	OCEANL3-U01	is able to use current scientific terminology in marine geology in a variety of forms of expression	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
Subject contents	History of ocean floor research and contemporary research programmes. The formation of modern oceans and the geological development of their floor. Structure of the oceanic crust. Forms of ocean basin floor topography and their relationship to geological processes. Inflow of sedimentary material to the seas and oceans. The regularities of spatial distribution of sediments in the ocean. Marine sediments and their rate of sedimentation. The geological history of the Baltic Sea.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	written exam	51.0%	100.0%

Recommended reading	Basic literature	<p>Duxbury A. C., Duxbury A. B., Sverdrup K. A. 2002: Oceans of the World. Wyd. Naukowe PWN</p> <p>Erickson J. 1996: Marine Geology: Undersea Landforms and Life Forms. Facts on File</p> <p>Frisch W., Meschede M., Blakey R. 2011. Plate tectonics. Continental drift and mountain building. Springer</p> <p>Larter R.D., Leat P.T. 2003 Intra-Oceanic subduction systems. The Geological Society London</p> <p>Leontiew O. K. 1989. Geology of the sea. Wyd. Naukowe PWN</p> <p>Lallemand S., Funicello F., 2009. Subduction zone dynamics, Springer-Verlag Berlin</p> <p>Yuen, D.A., Maruyama, S., Karato, S.-i., Windley, B.F. (Eds.), 2007, Superplumes: Beyond Plate Tectonics, Springer</p> <p>Witak M., 2013. Outline of the postglacial evolution of the Southern Baltic. [in:] J. Cyberski (Ed.), Coastal protection in state maritime policy.</p>
	Supplementary literature	<p>Leontjew O.K. 1972 Bottom of the Ocean. Wyd. Geologiczne</p> <p>Stanley S. M., 2002, History of the Earth. Wydawnictwo Naukowe PWN</p>
	eResources addresses	<p>Podstawowe</p> <p>http://www.deepseadrilling.org/ - Presentation of the achievements of the Deep Sea Drilling Project</p> <p>http://www.odplegacy.org/index.html - Presentation of the achievements of the Ocean Drilling Program</p> <p>https://iodp.tamu.edu/ - The International Ocean Discovery Program (IODP) is an international research collaboration that coordinates seagoing expeditions to study the history of the Earth recorded in sediments and rocks beneath the ocean floor.</p> <p>https://tos.org/oceanography/ - Journal "Oceanography" is the official magazine of The Oceanography Society</p> <p>Uzupełniające</p> <p>Adresy na platformie eNauczanie:</p>
Example issues/ example questions/ tasks being completed	<p>Describe the types of oceanic basalts and the criteria for distinguishing them.</p> <p>Name the main morphological units of the oceans.</p> <p>Compare the active and passive marginal edges of the ocean.</p> <p>Characterise the distribution of biogenic sediments, identify factors influencing their distribution.</p>	
Work placement	Not applicable	

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