University of Gdańsk

Subject card

Subject name and code	Principles of the Baltic Sea Geology - lecture, PG_00201134		
Field of study	Marine Hydrography		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
Education level	Bachelor's 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	3	Language of instruction	Polish
Semester of study	5	ECTS credits	1.0
Learning profile	practical	Assessment form	credit
Conducting unit	Department of Geophysics -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Maria Rucińska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

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	15	1.0	9.0	25

Subject objectives

Understanding the genesis and geological structure of the Baltic Sea and the types of bottom sediments and their distribution patterns

Learning outcomes

Course outcome	Subject outcome	Method of verification
[HML3-W04] knows and understands, at an advanced level, the issue of measurements related to the exploration of sea basins and inland waters and tools allowing to describe, interpret and present the results of measurements	knows and understands, at an advanced level, the analytical methods used in sediment research, as well as the statistical methods and tools for interpreting the results of laboratory analyses of Baltic Sea bottom sediments	[SW4] test/exam - oral or written
[HML3-W02] knows and understands, at an advanced level, selected phenomena and processes occurring in the hydrosphere, atmosphere, lithosphere and biosphere, their interconnections and relations, as well as practical applications of this knowledge in professional activities related to the field of study	knows and understands, at an advanced level, the geological structure of the Baltic region as a result of endogenous and exogenous processes; using appropriate terminology, explains the conditions of transport and deposition of marine sediments	[SW4] test/exam - oral or written

Subject contents

Stratigraphy, genesis and lithology of sediments of the Baltic area. Development of the Baltic Sea area in the Pleistocene - glaciations and recent deglaciation. Origin and evolution of the Baltic Sea (late glacial and Holocene). Relative water levels changes of the Baltic Sea in the late Pleistocene and Holocene. Contemporary sedimentary processes in the Baltic Sea. Sediment transport and despsition conditions in the marine environment.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
zaliczenie pisemne z pytaniami otwartymi	51.0%	100.0%

Recommended reading	Basic literature	1. GUDELIS W. K., JEMIELIANOW J. M.: Geologia Morza Bałtyckiego. Wyd. geologiczne, Warszawa 1982. 2. MOJSKI J. E. (red.): Atlas geologiczny Południowego Bałtyku. Państwowy Instytut Geologiczny, Warszawa Sopot 1995. 3. UŚCINOWICZ Sz. (red.): Geochemia osadów powierzchniowych Morza Bałtyckiego. Państwowy Instytut Geologiczny, 2011. 4. EMELYANOV E. M.: Geology of the Gdańsk Basin, Baltic Sea. Russian Academy of Sciences, Yantarnyskaz 2002. 5. VOIPIO A. (red.): The Baltic Sea. Elsevier Oceanography series, 1981 (chapter: WINTERHALTER B. et al.: Geology of the Baltic Sea).
	Supplementary literature	Kramarska R. (red.), 1999, Mapa geologiczna dna Bałtyku bez utworów czwartorzędowych, 1:500 000. PIG, Warszawa Szczepańska T., Uścinowicz Sz., 1994, Atlas geochemiczny południowego Bałtyku. PIG, Warszawa. Uścinowicz Sz., 2003, The Southern Baltic relative sea level changes, glacio-isostatic rebound and shoreline displacement. PIG Sp. Pap., 10. Uścinowicz Sz., Narkiewicz W., Sokołowski K., 2003, Mineralogical composition and granulometry W: Contaminants in the Baltic Sea sediment
	eResources addresses	
Example issues/ example questions/ tasks being completed	List and describe the freshwater development phases of the Baltic Sea (temporal extent, spatial extent, sediments, etc.).	
Work placement	Not applicable	

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