University of Gdańsk

Subject card

Subject name and code	Marine Paleoenvironments and Methods of Investigation - lecture, PG_00205336		
Field of study	Oceanography		
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 Optional subject group 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	3	Language of instruction	Polish
Semester of study	5	ECTS credits	2.0
Learning profile	academic	Assessment form	exam
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 hab. Małgorzata Witak, prof. UG	
	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 presentation

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	2.0	18.0	50

Subject objectives

Understanding of the mechanisms of evolution of the lithosphere, hydrosphere, atmosphere and biosphere. The ability to apply stratigraphic methods in determining the age of geological objects and processes. To be able to analyse the causes and effects of sedimentary-diastrophic cycles in Poland.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANL3-W05] has an advanced knowledge of techniques, research methods, and tools (mathematical, statistical, and computational) used by oceanographers to describe and interpret processes and phenomena occurring in the marine environment	knows at an advanced level the techniques, research methods and tools and understands the importance of basic research methods for the determination of relative and absolute ages of geological events and is able to interpret them correctly in relation to exogenous processes in the past	[SW4] test/exam - oral or written
[OCEANL3-W02] has a broad knowledge and understanding of physical, biological, chemical, and geological processes and phenomena occurring in aquatic environments, with particular emphasis on the marine environment	knows and understands to an advanced level the interrelationship between animate and non-living elements of the aquatic palaeoenvironment, identifies and correctly describes basic geological phenomena and explains their course in relation to past marine processes	[SW4] test/exam - oral or written
[OCEANL3-W01] has an advanced knowledge and understanding of the terminology used in oceanography and related exact and natural sciences (in Polish and a selected foreign language)	has an advanced knowledge and understanding of the terminology used in stratigraphy and historical geology	[SW4] test/exam - oral or written
[OCEANL3-U12] is able to systematically expand and update oceanographic knowledge and enhance professional qualifications	is able to systematically expand and update his/her knowledge of historical geology and improve professional qualifications	[SU4] test/exam - oral or written
[OCEANL3-U01] is able to use the current scientific terminology in the field of oceanography in various forms of expression	is able to use the applicable scientific terminology in the field of stratigraphy andhistorical geology in various forms of expression	[SU4] test/exam - oral or written
[OCEANL3-U03] is able to process, describe, and present results, and draw conclusions	is able to identify fossils, sedimentary rocks and tectonic structures and, on their basis, to make correct inferences about exogenous processes in the past	[SU4] test/exam - oral or written

Subject contents

Importance of palaeoenvironmental change studies for the natural sciences. Terminology used in marine sediment stratigraphy. Methods of relative age studies (chronostratigraphy, lithostratigraphy and biostratigraphy). Geochronological methods for age determination of geological objects and processes. Causes and consequences of changes in marine palaeoenvironments in Poland from the Precambrian to the present day.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test	51.0%	100.0%

Recommended reading

Basic literature	Orłowski S. Szulczewski M. 1990. Geologia historyczna. Cz. I. Wyd. Geol., Warszawa Mizerski W., Orłowski S. 2005. Geologia historyczna dla geografów. Wydawnictwo Naukowe PWN, Warszawa
Supplementary literature	Racki G., Narkiewicz M., 2006, Polskie Zasady Stratygrafii, PIG, Warszawa Stanley S. M., 2002. Historia Ziemi, Wydawnictwo Naukowe PWN, Warszawa van Andel, T.H., 1997. Nowe spojrzenie na starą planetę. Wyd. Naukowe PWN, Warszawa
eResources addresses	

Example issues/ example questions/ tasks being completed

1. Explain the importance of fossils in stratigraphy

2. List the basic lithostratigraphic units

3 Explain the changes in land and sea configuration in the early Palaeozoic

Work placement

Not applicable

Document generated electronically. Does not require a seal or signature.