University of Gdańsk

Subject card

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|---|---|---|---|
| Subject name and code | Marine Geology - laboratory, PG_00206130 | | |
| Field of study | Oceanography | | |
| Date of commencement of studies | October 2027 | Academic year of realisation of subject | 2027/2028 |
| Education level | Bachelor's studies | Subject group | Obligatory subject group in the field of study<br>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 | 1 | Language of instruction | Polish |
| Semester of study | 2 | 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 Angelika Szmytkiewicz | |
| | 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 |
|---|---|---|
| [OCEANL3-U01] is able to use the current scientific terminology in the field of oceanography in various forms of expression | is able to use current scientific terminology in marine geology in a variety of forms of expression | [SU2] presentation/project/paper/ report<br>[SU4] 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 marine geology and used to describe geological processes in the seas and oceans | [SW4] test/exam - oral or written<br>[SW3] text preparation/written work<br>[SW5] implementation of a problem task |
| [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 geological processes and the accompanying physical, biological, chemical phenomena occurring within the oceanic crust and in the marine environment | [SW4] test/exam - oral or written<br>[SW3] text preparation/written work |
| [OCEANL3-U04] is able to independently search for information in Polish and foreign specialist literature, as well as on the Internet and in databases | is able to search independently in Polish and English language specialist literature, on the Internet and in databases for the correct description of the morphology and characteristics of the seabed, sediments and the course of geological processes | [SU2] presentation/project/paper/ report<br>[SU5] implementation of a problem task |
| [OCEANL3-U11] is able to work individually and collaborate in a team, assuming various roles and performing different tasks | is able to work individually and collaboratively in a group, planning and carrying out the successive stages of an assigned task, and takes responsibility for its correctness and results | [SU2] presentation/project/paper/ report<br>[SU3] text preparation/written work<br>[SU5] implementation of a problem task |
| [OCEANL3-U06] is able to formulate and solve advanced problems related to the functioning of individual components of the marine environment, using knowledge from various fields and scientific disciplines | is able to define relationships concerning the functioning of particular components of the marine environment, with particular emphasis on geological processes, integrating knowledge from various fields and scientific disciplines | [SU3] text preparation/written work<br>[SU4] test/exam - oral or written<br>[SU5] implementation of a problem task |

## 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 |
|---|---|---|
| Test | 51.0% | 60.0% |
| Reports | 51.0% | 40.0% |

## Recommended reading

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|---|---|
| Basic literature | Duxbury A. C., Duxbury A. B., Sverdrup K. A. 2002: Oceans of the World. Wyd. Naukowe PWN<br><br>Witak M., 2013. Outline of the postglacial evolution of the Southern Baltic. [in:] J. Cyberski (Ed.), Coastal protection in state maritime policy. |
| Supplementary literature | Leontjew O.K. 1972 Bottom of the Ocean. Wyd. Geologiczne<br><br>Stanley S. M., 2002, History of the Earth. Wydawnictwo Naukowe PWN |
| 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.

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| Work placement | Not applicable |

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