

## Subject card

|                                             |                                                                                                                                                                                                                                                                                                                                     |                                                          |                                         |                                     |                                                                                                             |            |     |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------|------------|-----|
| Subject name and code                       | Sea Floor Geology - laboratory classes , PG_00201091                                                                                                                                                                                                                                                                                |                                                          |                                         |                                     |                                                                                                             |            |     |
| Field of study                              | Marine Hydrography                                                                                                                                                                                                                                                                                                                  |                                                          |                                         |                                     |                                                                                                             |            |     |
| 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 practical vocational preparation |            |     |
| 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                            | practical                                                                                                                                                                                                                                                                                                                           |                                                          | Assessment form                         |                                     | credit                                                                                                      |            |     |
| Conducting unit                             | Department of Geophysics -> Faculty of Oceanography and Geography -> Rector                                                                                                                                                                                                                                                         |                                                          |                                         |                                     |                                                                                                             |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor                                                                                                                                                                                                                                                                                                                  |                                                          | dr Agnieszka Kubowicz                   |                                     |                                                                                                             |            |     |
|                                             | 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                                                       |                                         | 2.0                                 |                                                                                                             | 18.0       | 50  |
| Subject objectives                          | To know and understand the genesis, geological structure and forms of topography of the bottom of ocean basins, types of bottom sediments and the regularity of their occurrence. Spatial interpretation of morphological-structural elements of the ocean floor on geological maps and their connection with geological processes. |                                                          |                                         |                                     |                                                                                                             |            |     |

| Learning outcomes               | Course outcome                                                                                                                                                                                                                                                                                                                                      | Subject outcome                                                                                                                                                                                   | Method of verification                                                                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | [HML3-U18] is able to work individually and in team, manage the work of the team, in particular comply with health and safety regulations and ergonomics                                                                                                                                                                                            | is able to prepare graphical studies, syntheses and conclusions of the conducted analyses individually and in a team                                                                              | [SU3] text preparation/written work<br>[SU5] implementation of a problem task<br>[SU8] observation of student's independent or team work                               |
|                                 | [HML3-U16] is able to prepare in Polish and foreign language a study of a problem in the field of study with documented conclusions, supported by a report and a multimedia presentation                                                                                                                                                            | is able to prepare graphical studies, syntheses and conclusions of the conducted analyses individually and in a team                                                                              | [SU2] presentation/project/paper/report<br>[SU5] implementation of a problem task                                                                                      |
|                                 | [HML3-K02] is ready to correctly determine the priorities in professional work for the implementation of a task specified by himself/ herself or others                                                                                                                                                                                             | is ready to complete individual and team work on time                                                                                                                                             | [SK8] observation of student's independent or team work                                                                                                                |
|                                 | [HML3-U14] is able to use the applicable terminology in presenting and discussing problems related to the field of study                                                                                                                                                                                                                            | is able to use terminology in describing the geological structure and morphology of the ocean and seabed                                                                                          | [SU1] oral statement/conversation/discussion<br>[SU3] text preparation/written work<br>[SU4] test/exam - oral or written<br>[SU5] implementation of a problem task     |
|                                 | [HML3-U08] is able to independently use the professional literature available in traditional and electronic form, make an assessment, critical analysis and synthesis as well as the correct interpretation of the information obtained                                                                                                             | is able to analyze, based on source materials, the morphological and structural elements of the sea and ocean floor, the distribution of sediments and their relationship to geological processes | [SU2] presentation/project/paper/report<br>[SU4] test/exam - oral or written<br>[SU5] implementation of a problem task                                                 |
|                                 | [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 at an advanced level the causes and effects of geological processes in the marine environment                                                                                               | [SW4] test/exam - oral or written<br>[SW1] oral statement/conversation/discussion<br>[SW2] presentation/project/paper/report<br>[SW5] implementation of a problem task |
|                                 | [HML3-W01] knows and understands, at an advanced level, selected facts, phenomena and processes, as well as methods and theories concerning them, explaining the complex relationships between them, constituting basic general knowledge in the field of scientific disciplines forming the theoretical foundations specific to the field of study | knows at an advanced level the relationship of physical processes to geological processes in the marine environment                                                                               | [SW4] test/exam - oral or written<br>[SW1] oral statement/conversation/discussion<br>[SW2] presentation/project/paper/report<br>[SW5] implementation of a problem task |
| Subject contents                | Morphological units of the world ocean floor. Seismicity and volcanism in the world ocean. Hot spots. Hydrothermal processes. Types of lithosphere plate boundaries. The Triple Junction. Lithology and mineral composition of sediments. Genesis and morphological units of the Baltic Sea.                                                        |                                                                                                                                                                                                   |                                                                                                                                                                        |
| Prerequisites and co-requisites |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                   |                                                                                                                                                                        |
| Assessment methods and criteria | Subject passing criteria                                                                                                                                                                                                                                                                                                                            | Passing threshold                                                                                                                                                                                 | Percentage of the final grade                                                                                                                                          |
|                                 | final test (written)                                                                                                                                                                                                                                                                                                                                | 51.0%                                                                                                                                                                                             | 60.0%                                                                                                                                                                  |
|                                 | group and individual work (problem-based task, written assignment, oral presentation)                                                                                                                                                                                                                                                               | 51.0%                                                                                                                                                                                             | 40.0%                                                                                                                                                                  |

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| Recommended reading                                            | Basic literature                                                                                                                                      | Geographical Nomenclature of the World, 2008. book 10 Seas and Oceans, Central Office of Geodesy and Cartography, Warsaw, Poland<br><br>Uścińowicz Sz., Kramarska R., 2011. Geological structure and bottom sediments of the Baltic Sea, [in:] Geochemistry of Baltic Sea surface sediments, Sz. Uścińowicz (ed.), PIG-BIP |
|                                                                | Supplementary literature                                                                                                                              | -                                                                                                                                                                                                                                                                                                                          |
|                                                                | eResources addresses                                                                                                                                  |                                                                                                                                                                                                                                                                                                                            |
| Example issues/<br>example questions/<br>tasks being completed | <p>Identify the types of triple-junction that occur between plates in the Pacific.</p> <p>Characterize the processes of spreading and subduction.</p> |                                                                                                                                                                                                                                                                                                                            |
| Work placement                                                 | Not applicable                                                                                                                                        |                                                                                                                                                                                                                                                                                                                            |

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