

## Subject card

|                                             |                                                                                                                                                                                                                                                                                   |                                                          |                                                                                                                                  |                                     |                                   |            |     |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------|------------|-----|
| Subject name and code                       | , PG_00120930                                                                                                                                                                                                                                                                     |                                                          |                                                                                                                                  |                                     |                                   |            |     |
| Field of study                              | Geology                                                                                                                                                                                                                                                                           |                                                          |                                                                                                                                  |                                     |                                   |            |     |
| Date of commencement of studies             | October 2025                                                                                                                                                                                                                                                                      |                                                          | Academic year of realisation of subject                                                                                          |                                     | 2027/2028                         |            |     |
| Education level                             | Bachelor's studies                                                                                                                                                                                                                                                                |                                                          | Subject group                                                                                                                    |                                     | Optional subject group            |            |     |
| Mode of study                               | full-time studies                                                                                                                                                                                                                                                                 |                                                          | Mode of delivery                                                                                                                 |                                     | at the university                 |            |     |
| Year of study                               | 3                                                                                                                                                                                                                                                                                 |                                                          | Language of instruction                                                                                                          |                                     | Polish                            |            |     |
| Semester of study                           | 6                                                                                                                                                                                                                                                                                 |                                                          | ECTS credits                                                                                                                     |                                     | 1.0                               |            |     |
| Learning profile                            | academic                                                                                                                                                                                                                                                                          |                                                          | Assessment form                                                                                                                  |                                     | credit                            |            |     |
| Conducting unit                             | Department of Geophysics -> Faculty of Oceanography and Geography -> Rector                                                                                                                                                                                                       |                                                          |                                                                                                                                  |                                     |                                   |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor                                                                                                                                                                                                                                                                |                                                          | dr Robert Sokołowski                                                                                                             |                                     |                                   |            |     |
|                                             | 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                                                       |                                                                                                                                  | 7.0                                 |                                   | 10.0       | 32  |
| Subject objectives                          | To familiarise students with the specifics of marine mapping surveys, to present the methodology of marine geological mapping, the use of non-invasive survey methods, the preparation of geological maps of the marine dan, application for scientific and application purposes. |                                                          |                                                                                                                                  |                                     |                                   |            |     |
| Learning outcomes                           | Course outcome                                                                                                                                                                                                                                                                    |                                                          | Subject outcome                                                                                                                  |                                     | Method of verification            |            |     |
|                                             | [GEOLL3_W02] knows and understands the terminology appropriate in science and natural sciences                                                                                                                                                                                    |                                                          | Knows and understands terminology specific to marine geological mapping                                                          |                                     | [SW4] test/exam - oral or written |            |     |
|                                             | [GEOLL3_W05] knows the structure and geological development of selected regions in Poland and in the world                                                                                                                                                                        |                                                          | Knows the structure and geological development of marine areas in Poland and worldwide                                           |                                     | [SW4] test/exam - oral or written |            |     |
|                                             | [GEOLL3_W04] knows and understands phenomena and processes occurring in the past and today in the interior of the Earth and on its surface, defines the methods of how to study them                                                                                              |                                                          | Knows and understands past and present seabed phenomena and processes, defines methods of their study                            |                                     | [SW4] test/exam - oral or written |            |     |
|                                             | [GEOLL3_W06] knows statistical and IT tools as well as the principles of preparing engineering and geological documentation and cartographic materials                                                                                                                            |                                                          | Is familiar with statistical and information technology tools and with the principles for producing marine cartographic material |                                     | [SW4] test/exam - oral or written |            |     |

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|----------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Subject contents                                               | Terminology used in marine geological cartography.                              |                                                                                                                                                                                                                                                                                                                                                                              |                               |
|                                                                | Methodology and specifics of marine geological cartography.                     |                                                                                                                                                                                                                                                                                                                                                                              |                               |
|                                                                | Sources of information and design of marine cartographic surveys.               |                                                                                                                                                                                                                                                                                                                                                                              |                               |
|                                                                | Use of non-invasive methods of seabed surveys.                                  |                                                                                                                                                                                                                                                                                                                                                                              |                               |
|                                                                | Surface and depth maps of the seabed.                                           |                                                                                                                                                                                                                                                                                                                                                                              |                               |
|                                                                | Analysis of bathymetric and seismoacoustic data of the seabed.                  |                                                                                                                                                                                                                                                                                                                                                                              |                               |
|                                                                | Delineation of geological units and boundaries.                                 |                                                                                                                                                                                                                                                                                                                                                                              |                               |
|                                                                | The role of marine cartography in scientific research and applied applications. |                                                                                                                                                                                                                                                                                                                                                                              |                               |
| Prerequisites and co-requisites                                |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                              |                               |
| Assessment methods and criteria                                | Subject passing criteria                                                        | Passing threshold                                                                                                                                                                                                                                                                                                                                                            | Percentage of the final grade |
|                                                                | Written pass                                                                    | 51.0%                                                                                                                                                                                                                                                                                                                                                                        | 100.0%                        |
| Recommended reading                                            | Basic literature                                                                | Instrukcja w sprawie opracowania Mapy geośrodowiskowej Polski w skali 1:50 000. Państw. Inst. Geol., Warszawa, 2005.                                                                                                                                                                                                                                                         |                               |
|                                                                | Supplementary literature                                                        | Labus M., Labus K., 2008. Podstawy geologii strukturalnej i kartografii geologicznej, Wyd. Politechniki Śląskiej, Gliwice<br>Słowański W., Kotański Z., Hakenberg M., Królikowski C., Szczypa S., 1989. Kartografia geologiczna, Wyd. Geologiczne, Warszawa<br>Instrukcja opracowania i wydania Szczegółowej mapy geologicznej Polski w skali 1: 50 000. 1996. PIG, Warszawa |                               |
|                                                                | eResources addresses                                                            |                                                                                                                                                                                                                                                                                                                                                                              |                               |
| Example issues/<br>example questions/<br>tasks being completed | Main methods of seabed mapping                                                  |                                                                                                                                                                                                                                                                                                                                                                              |                               |
| Work placement                                                 | Not applicable                                                                  |                                                                                                                                                                                                                                                                                                                                                                              |                               |

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