

## Subject card

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                |                                                          |                                                                                                                                                                                                                                                      |                                     |                                                                                           |            |     |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------|------------|-----|
| Subject name and code                       | Geohazards, PG_00131547                                                                                                                                                                                                                                                                                                                                                                        |                                                          |                                                                                                                                                                                                                                                      |                                     |                                                                                           |            |     |
| Field of study                              | Marine Hydrography                                                                                                                                                                                                                                                                                                                                                                             |                                                          |                                                                                                                                                                                                                                                      |                                     |                                                                                           |            |     |
| Date of commencement of studies             | October 2025                                                                                                                                                                                                                                                                                                                                                                                   |                                                          | Academic year of realisation of subject                                                                                                                                                                                                              |                                     | 2028/2029                                                                                 |            |     |
| Education level                             | Bachelor's studies                                                                                                                                                                                                                                                                                                                                                                             |                                                          | Subject group                                                                                                                                                                                                                                        |                                     | Optional subject group<br>Subject group related to practical vocational preparation       |            |     |
| Mode of study                               | full-time studies                                                                                                                                                                                                                                                                                                                                                                              |                                                          | Mode of delivery                                                                                                                                                                                                                                     |                                     | at the university                                                                         |            |     |
| Year of study                               | 4                                                                                                                                                                                                                                                                                                                                                                                              |                                                          | Language of instruction                                                                                                                                                                                                                              |                                     | Polish                                                                                    |            |     |
| Semester of study                           | 7                                                                                                                                                                                                                                                                                                                                                                                              |                                                          | 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 Dominik Pałgan                                                                                                                                                                                                                                    |                                     |                                                                                           |            |     |
|                                             | 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                                 |                                                                                           | 10.0       | 26  |
| Subject objectives                          | Acquisition of knowledge and skills on geohazards with a focus on the marine coastal zone.Acquisition of skills to analyse selected geohazards from databases.Geological record of natural disasters.                                                                                                                                                                                          |                                                          |                                                                                                                                                                                                                                                      |                                     |                                                                                           |            |     |
| Learning outcomes                           | Course outcome                                                                                                                                                                                                                                                                                                                                                                                 |                                                          | Subject outcome                                                                                                                                                                                                                                      |                                     | Method of verification                                                                    |            |     |
|                                             | [HML3-W02] 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 a selected phenomena and processes of the hydrosphere, atmosphere, lithosphere and biosphere, their interrelationships and relations, as well as practical applications of this knowledge in the analysis of geohazards and their consequences |                                     | [SW1] oral statement/ conversation/discussion<br>[SW2] presentation/project/paper/ report |            |     |
|                                             | [HML3-U08] 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 use independently the professional literature available in traditional and electronic form, evaluate, critically analyse and synthesise and correctly interpret the information obtained in relation to a range of geohazards             |                                     | [SU1] oral statement/conversation/ discussion<br>[SU2] presentation/project/paper/ report |            |     |
|                                             | [HML3-U03] recognise natural (including geological) and anthropogenic objects and link them to the processes leading to their formation                                                                                                                                                                                                                                                        |                                                          | is able to identify natural (including geological) and anthropogenic objects and link them to the processes leading to their formation and the possibility of thembecoming a geohazard                                                               |                                     | [SU1] oral statement/conversation/ discussion<br>[SU2] presentation/project/paper/ report |            |     |
| Subject contents                            | Hazard classification, legal regulations - international and Polish. Gravitational mass movements on high coasts (landslides, calving, gravitational runoff, etc.), submarine landslides and their effects. Hydrological and climatic hazards (floods, coastal erosion, storm surges) and their effects. Volcanic and seismic hazards - conditions, forecasting, impacts (including tsunamis). |                                                          |                                                                                                                                                                                                                                                      |                                     |                                                                                           |            |     |

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|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Prerequisites and co-requisites                                |                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                      |                               |
| Assessment methods and criteria                                | Subject passing criteria                                                                                                                 | Passing threshold                                                                                                                                                                                                                                                                                                                    | Percentage of the final grade |
|                                                                | discussion                                                                                                                               | 51.0%                                                                                                                                                                                                                                                                                                                                | 25.0%                         |
|                                                                | presentation of the selected topic                                                                                                       | 51.0%                                                                                                                                                                                                                                                                                                                                | 75.0%                         |
| Recommended reading                                            | Basic literature                                                                                                                         | 1. MIZERSKI W., GRANICZNY M.: Geozagrożenia. Wyd. naukowe PWN, Warszawa 2017.                                                                                                                                                                                                                                                        |                               |
|                                                                | Supplementary literature                                                                                                                 | 1. GRANICZNY M., MIZERSKI W.: Katastrofy przyrodnicze. Wyd. naukowe PWN, Warszawa 2009.<br>2. HYNDMAN D., HYNDMAN D.: Natural Hazards and disasters. Brooks/Cole/Cengage Learning, Belmont 2014.<br>3. RAMOLA R. C., GUSAIN G. S.: Geo Hazards: Recent Research. 2015.<br>4. YINCAN Ye: Marine Geo-Hazards in China. Elsevier, 2017. |                               |
|                                                                | eResources addresses                                                                                                                     |                                                                                                                                                                                                                                                                                                                                      |                               |
|                                                                |                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                      |                               |
| Example issues/<br>example questions/<br>tasks being completed | The class will discuss geohazards that pose challenges to conducting hydrographic work, such as tsunamis, cliff slides and storm surges. |                                                                                                                                                                                                                                                                                                                                      |                               |
| Work placement                                                 | Not applicable                                                                                                                           |                                                                                                                                                                                                                                                                                                                                      |                               |

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