University of Gdańsk

# Subject card

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|---|---|---|---|
| Subject name and code | Introduction to Seabed Morphometry - lecture, PG_00204963 | | |
| Field of study | Oceanography | | |
| Date of commencement of studies | October 2026 | Academic year of realisation of subject | 2026/2027 |
| Education level | Master's studies | Subject group | Obligatory subject group in the field of study<br>Optional subject group<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 | 1 | ECTS credits | 2.0 |
| Learning profile | academic | Assessment form | credit |
| Conducting unit | Faculty of Oceanography and Geography -> Rector | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | prof. dr hab. Jarosław Tęgowski | |
| | 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

**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**

Recognition and understanding of methods of bathymetric data processing and quantitative and qualitative description of seabed morphometry.

**Learning outcomes**

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| [OCEANMU2-W03] has an in-depth understanding of research methods used in oceanography and related sciences, and interprets their mechanisms and interrelationships across different spatial and temporal scales | At an advanced level,she/he is able to use research methods used in oceanography. | [SW4] test/exam - oral or written |
| [OCEANMU2-W02] knows and understands complex processes and phenomena occurring in the marine environment, with particular emphasis on the coastal zone, as well as complex relationships between living and non-living elements of the aquatic environment | Is proficient in oceanographic issues, including marine coastal zone processes | [SW4] test/exam - oral or written |
| [OCEANMU2-W01] knows and understands in-depth specialized terminology used in oceanography and related sciences (in Polish and a selected foreign language) | Understands processes in the sea and coastal zone | [SW4] test/exam - oral or written |

**Subject contents**

Morphometry as a tool and a scientific sub-discipline.Methodology of bathymetric measurements.Bathymetric data interpolation methods.Uneven bottom surface - Numerical Terrain Model.Morphometric description and morphometric parameters.Seabed relief forms.Elements of statistical analysis of morphometric relief forms.Software used in morphometry.Classification of morphological features of bottom surface and bottom sediments.Morphometric reconstruction of bottom-forming processes - a case study.

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="3"></td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>written assessment with open-ended questions (tasks)</td><td>51.0%</td><td>100.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Lucieer, V.L., Lecours, V., Dolan, M.F.J. (eds) 2019. Marine Geomorphometry. MDPI Basel, Switzerland.Hengl, T., Reuter, H.I. (eds) 2008. Geomorphometry: Concepts, Software, Applications. Developments in Soil Science, vol. 33, Elsevier, 772 pp.Harris, P.T, Baker, E.K. (eds) 2012. Seafloor Geomorphology as Benthic Habitat. GeoHAB Atlas of Seafloor Geomorphic Features and BenthicHabitats. Elsevier, 900 pp.</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Medwin H. and Clay C. S., 1998. Fundamentals of Acoustical Oceanography. Academic Press, Boston, 712.Medwin H., 2005. Sounds in the Sea. From Ocean Acoustics to Acoustical Oceanography. Cambridge University Press, New York, 643.</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3"></td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
</table>

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