

Subject card

Subject name and code	Field courses at sea and in the coastal zone, PG_00121139						
Field of study	Oceanography						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Optional subject group 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		5.0		
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 Ewa Szymczak				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	90.0	0.0	0.0	0.0	90
	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	90		20.0		25.0	135
Subject objectives	Presentation of methods for geological investigations in the sea and coastal zone, recognition of geological structure of selected sections of the South Baltic coast. Learning to relate relief factors and processes with morphological forms. Introduction to forms of coastal protection.						
	Development and refinement of the student's skills in conducting interdisciplinary oceanographic work, collaborating as part of a research team to plan and carry out measurements, experiments and analyses including aspects of biological, chemical, physical oceanography, marine geology and marine biotechnology						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[OCEANMU2-K05] is ready to follow the rules occupational health and safety, taking care of the entrusted person specialized and recognition equipment emergency situations and take appropriate action activities	is prepared to comply with health and safety rules, to take care of the apparatus provided for field, offshore and laboratory measurements	[SK6] demonstration of practical skills [SK8] observation of student's independent or team work
	[OCEANMU2-W08] knows and understands safety and hygiene rules oceanographer's work in the laboratory, in the sea and in the costline zone and on the ship	knows the basic health and safety rules for the oceanographer in the laboratory, on board the research vessel and in the field	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
	[OCEANMU2-W05] knows and understands the principles of planning and conducting field and laboratory research as well as advanced methods and tools of scientific research, especially in the field of the studied specialty	has an in-depth knowledge and understanding of the principles of planning and conducting field and laboratory research and of the techniques, research methods and statistical tools used in the work of an oceanographer to describe and interpret marine phenomena and processes	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW3] text preparation/written work [SW5] implementation of a problem task
	[OCEANMU2-U06] can use specialized computer software and advanced mathematical and statistical methods in data analysis and description of processes and phenomena occurring in the marine environment and coastal zone	is able to use specialised computer software and statistical methods in data analysis and description of phenomena and processes in the marine environment	[SU3] text preparation/written work [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
	[OCEANMU2-U11] is able to work individually and cooperate in laboratory and field groups, performs various functions in them, including managerial ones, performs various assigned tasks	is able to carry out the given tasks individually and in cooperation in laboratory and field groups, research teams	[SU2] presentation/project/paper/ report [SU3] text preparation/written work [SU5] implementation of a problem task [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
	[OCEANMU2-U04] is ready to develop in an analytical and synthetic way research and analysis results and based on them creating conclusions	is able to analyse, summarise and evaluate the results of field measurements, surveys and analyses and to present conclusions	[SU2] presentation/project/paper/ report [SU3] text preparation/written work
	[OCEANMU2-K01] is ready to plan, implement and supervise, individually or collectively, next stages of the entrusted task, is ready to take responsibility for its results, cooperates effectively in the team and performs its functions in it various functions, including managerial ones	is prepared to plan, supervise and punctually deliver individual and group tasks, feels responsible for the results and effects of the work undertaken	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report [SK3] text preparation/written work [SK8] observation of student's independent or team work
	[OCEANMU2-U03] can plan and carry out independently advanced research and measurements, both in field and laboratory, using appropriately selected measurement and analytical techniques in the field of oceanography, adequately to the studied specialty and research problem	is able to plan and conduct observations, surveys, field and laboratory measurements, measurements in the sea, uses appropriately selected samplers, sampling methods and description of samples for sediment types, in field measurements uses appropriate apparatus	[SU3] text preparation/written work [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
	[OCEANMU2-U05] is able to use source information in Polish and a selected foreign language, including archival and electronic databases, in the field of oceanographic issues, performs critical analysis and synthesis of information	is able to use source information in describing and interpreting research results	[SU2] presentation/project/paper/ report [SU3] text preparation/written work [SU6] demonstration of practical skills [SU8] observation of student's independent or team work

Subject contents	1. Beach and shallow coastal bottom profiling to a depth of 1 m. 2. Sediment sampling methods. 3. Non-invasive methods of seafloor exploration. 4. Methods of documentation and preparation of field surveys. 5. Evidence of marine, fluvial, glacial, eolian and limnic processes in the marine coastal zone. 6. Elements of stratigraphy and lithology of erosion and accumulation shores. 7. Evolution of the Baltic Sea. 8. Coastal protection. 9. Advanced methods used to study biogeochemical and physical processes in the sea (module in marine biology, marine and atmospheric chemistry, marine geology and marine physics). Depending on the research planned, use of measuring devices/samplers, including: CTD probe, Acoustic Doppler Current Profiler (ADCP), hydroacoustic devices (side scan sonar, multibeam echosounder, subbottom profiler), autonomous underwater vehicle (ROV), bathymetric rosette, automatic weather station, multi sediment trap, sediment samplers (grabs, core samplers), plankton nets and others		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	laboratory report	51.0%	25.0%
	written assessment	51.0%	50.0%
	cruise report	51.0%	25.0%
Recommended reading	Basic literature	Zaawansowane metody interdyscyplinarnych badań Morza Bałtyckiego - skrypt do zajęć - https://oig.ug.edu.pl/strona/96386/skrypt_do_zajec_zaaawansowane_metody_interdyscyplinarnych_badan_ (in Polish) Bolałek J. (red.). 2010. Fizyczne, biologiczne i chemiczne badania morskich osadów dennych. Wyd. UG (in Polish) Gradziński R., Kostecka A., Radomski A., Unrug R., 1986, Zarys sedimentologii. Wyd. Geol., Warszawa (in Polish) Gudelis W. K., Jemielianow J. M., 1982. Geologia Morza Bałtyckiego. Wyd. Geol., Warszawa (in Polish) Leontiew O. K., Nikiforow L. G., Safinow G. A., 1982, Geomorfologia brzegów morskich. Wyd. Geol., Warszawa (in Polish) Łęczyński L., Szymczak E., 2010. Własności fizyczne osadów dennych. [w:] J. Bolałek (red.) Fizyczne, biologiczne i chemiczne badania morskich osadów dennych. Wyd. UG (in Polish) Witak, 2013. Zarys postglacjanej ewolucji Bałtyku Południowego. [w:] J. Cyberski (red.) Ochrona wybrzeża w polityce morskiej państwa, KaszubskoPomorska Szkoła Wyższa w Wejherowie, Wejherowo, 31-48. (in Polish) Bohdziewicz L 1960. Budowa geologiczna i procesy dynamiczne w strefie brzegowej w Orłowie i Rewie. PTG, t. XXXIX, z. 4, (in Polish) Rudowski S. 1962. Mikroformy strefy brzegowej Bałtyku w Polsce. Acta Geol. Pol. vol. XII, nr 4, (in Polish) Subotowicz W. 1980. Geodynamika brzegów klifowych regionu gdańskiego. Peribalticum; Problemy badawcze obszaru bałtyckiego. GTN Gdańsk (in Polish) Tomczak A. 2005. Stan i zagrożenia Półwyspu Helskiego. Wybrane zagadnienia z przeszłości geologicznej i przyszłości Półwyspu Helskiego. GTN Gdańsk (in Polish) Literatura aktualizowana na bieżąco w zależności od lokalizacji poligonu badawczego	
	Supplementary literature	Literature updated on an ongoing basis depending on the location of the research field	

	eResources addresses	
Example issues/ example questions/ tasks being completed	presented by the trainer	
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.