University of Gdańsk

Subject card

Subject name and code	Field Classes at Sea and in the Coastal Zone, PG_00206211		
Field of study	Oceanography		
Date of commencement of studies	October 2027	Academic year of realisation of subject	2027/2028
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	4.0
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 Patrycja Jernas	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	70.0	0.0	0.0	0.0	70

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	70	4.0	26.0	100

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-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-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-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;	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-U06] is able to use specialized computer software as well as advanced mathematical and statistical methods to analyze data and describe processes and phenomena occurring in the marine and coastal environment; evaluates their reliability and usefulness and performs critical analysis	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-U05] is able to use source information in Polish and a chosen foreign language, including archival and electronic databases, within the field of oceanography; critically analyzes and synthesizes information, and is capable of performing critical interpretation and synthesis of data	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
[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-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-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

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, AcousticDoppler 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
written assessment	51.0%	50.0%
laboratory report	51.0%	25.0%
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_zaawansowane_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 sedymentologii. 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 L1960. 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	

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