

Subject card

Subject name and code	Field courses at sea and in the coastal zone, PG_00117730						
Field of study	Oceanography						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2024/2025		
Education level	Master's studies	Subject group			Obligatory subject group in the field of study Optional subject group Specialty 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					
Conducting unit	Katedra Funkcjonowania Ekosystemów Morskich -> Faculty of Oceanography and Geography -> Rektor						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Mariusz Sapota					
	Teachers	dr hab. Mariusz Sapota mgr Adam Makatun mgr Gracjana Budzałek dr Justyna Świeżak dr Dominik Pałgan dr Anna Dziubińska dr Dorota Pryputniewicz-Flis dr Jakub Idczak dr Iwona Pawliczka Vel Pawlik					
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	80.0	0.0	0.0	0.0	80
	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	80	15.0		25.0	120	
Subject objectives	Developing and improving student skills in interdisciplinary research at sea using advanced scientific tools and methods. Practice of cooperation in a research team in planning, performing and developing research on marine ecosystems in the field of biological, chemical, physical oceanography, marine geology and marine biotechnology.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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	knows and understands in-depth the principles of planning and conducting field and laboratory research as well as advanced methods and tools of scientific research in the field of marine ecosystem research	[SW2] presentation/project/paper/report
	[OCEANMU2-W04] knows and understands the latest research trends in the field of oceanography as well as the possibilities of practical application of scientific achievements	knows and understands in depth the latest research trends in the field of biological oceanography, as well as the possibilities of practical application of the acquired knowledge	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report
	[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 ready to comply with occupational health and safety rules, take care of the specialist equipment entrusted to him, and recognize hazardous situations and take appropriate actions	[SK1] oral statement/conversation/discussion [SK6] demonstration of practical skills [SK8] 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 and synthetically develop research results and draw correct conclusions in the context of marine ecosystems	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report
	[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 ready to plan, implement and supervise, individually or as a team, subsequent stages of the assigned task, is ready to take responsibility for its results, cooperates effectively in a team, performing various functions, including managerial ones	[SK1] oral statement/conversation/discussion [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 independently plan and conduct advanced research and measurements, both in the field and in the laboratory, using appropriately selected measurement and analytical techniques in the field of marine ecosystem research	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU6] demonstration of practical skills
	[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 on marine ecosystems, in Polish and English, including archival and electronic databases, in the field of oceanographic issues, performs critical analysis and synthesis of information	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report
	[OCEANMU2-W07] knows and understands legal regulations, principles of sustainable development of the marine environment, its protection and management of the marine environment and its resources	knows and understands legal regulations, principles of sustainable development of the marine environment, its protection and management of the marine environment and its resources	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report
	[OCEANMU2-W03] knows and understands research methods used in oceanography and related sciences	knows and understands in depth the research methods used in biological oceanography and related sciences	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report
	[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 and understands the principles of health and safety at work of an oceanographer in the laboratory, at sea and in the coastal zone, and on a ship	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report
	[OCEANMU2-W01] knows and understands in-depth specialized terminology used in oceanography and related sciences (in Polish and a selected foreign language)	knows and understands in-depth the specialist terminology used in marine ecosystem research (in Polish and English)	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report

	<table border="1"> <thead> <tr> <th>Course outcome</th> <th>Subject outcome</th> <th>Method of verification</th> </tr> </thead> <tbody> <tr> <td>[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</td> <td>is able to work individually and cooperate in laboratory and field groups, performs various functions in them, including management, performs various assigned tasks</td> <td>[SU1] oral statement/conversation/discussion [SU6] demonstration of practical skills [SU8] observation of student's independent or team work</td> </tr> <tr> <td>[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</td> <td>is able to use specialist computer software and advanced mathematical and statistical methods in data analysis and description of processes and phenomena occurring in marine ecosystems and coastal zones</td> <td>[SU2] presentation/project/paper/report [SU6] demonstration of practical skills</td> </tr> </tbody> </table>	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 work individually and cooperate in laboratory and field groups, performs various functions in them, including management, performs various assigned tasks	[SU1] oral statement/conversation/discussion [SU6] demonstration of practical skills [SU8] observation of student's independent or team work	[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 specialist computer software and advanced mathematical and statistical methods in data analysis and description of processes and phenomena occurring in marine ecosystems and coastal zones	[SU2] presentation/project/paper/report [SU6] demonstration of practical skills			
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Subject contents	A.1. Advanced methods used in research on the functioning of marine ecosystems (block in the field of marine biology, marine and atmospheric chemistry, marine geology and marine physics) A.2. Use, depending on the type of planned research, of measuring devices/samplers, including: CTD probe, acoustic current meter (Acoustic Doppler Current Profiler - ADCP), hydroacoustic devices (side sonar, multibeam echosounder, subbottom profiler), autonomous underwater vehicle (ROV), bathymetric rosette, automatic weather station, multi sediment trap, sediment samplers (diggers, core probes), plankton nets and others. A3. Taxonomic, temporal-spatial and functional differentiation of ecological formations in the coastal and deep-water zone of the Gulf of Gdańsk.												
Prerequisites and co-requisites													
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Example issues/ example questions/ tasks being completed													
Work placement	Not applicable												

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