

Subject card

Subject name and code	Study planning and data analysis - laboratory exercises, PG_00054997						
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	1		ECTS credits		5.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Agnieszka Jędruch				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	60.0	0.0	0.0	60
	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	60		6.0		70.0	136
Subject objectives	To prepare the student to independently statistically process and describe the results of environmental and laboratory studies and to plan research in line with the scientific objectives set.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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 prepared to exercise caution and criticism in accepting information from scientific literature, the internet and other media relating to marine science	[SU1] oral statement/conversation/discussion
	[OCEANMU2-K03] is ready to effectively organize his/her own work, is active and persistent and punctuality in completing tasks, is ready to carrying out evaluation of their own activities	Is willing to organise its work effectively	[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	can process, describe and present research findings and formulate conclusions based on them can use applications and specialised software, as well as mathematical and statistical methods in the presentation of results and the analysis of data	[SU3] text preparation/written 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 research on the marine environment and of the statistical methods used to describe and interpret biogeochemical phenomena and processes occurring in the aquatic environment	[SW4] test/exam - oral or written [SW3] text preparation/written work
Subject contents	B1. Database preparation B2. Graphical presentation of data B.3 Choice of statistical methods and principles of their application vs. how to design a study B4. Statistical inference		
Prerequisites and co-requisites	Fundamentals of statistics		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	written works	51.0%	100.0%
Recommended reading	Basic literature	A.1. Andrzej Stanisław, Przystępny kurs statystyki z zastosowaniem STATISTICA na przykładach z medycyny.(tom I, II i III), wydawca StatSoft Polska, łącznie 1900s.	
	Supplementary literature	Internetowy podręcznik statystyki (http://www.statsoft.pl/textbook/stathome.html) Radosław Kala, Statystyka dla przyrodników, Wydawnictwo Uniwersytetu Przyrodniczego w Poznaniu (wydanie III) 234s.	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Development of a set of results from environmental and/or experimental studies		
Work placement	Not applicable		

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