

Subject card

Subject name and code	Marine ecology - laboratory exercises, PG_00044095						
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		4.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Marine Ecosystems Functioning -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Justyna Świeżak				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	45.0	0.0	0.0	45
	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	45		12.0		50.0	107
Subject objectives	Familiarization with the fundamental problems in marine ecology, particularly the influence of abiotic and biotic factors on the functioning of marine organisms at different levels of biological organization.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[OCEANMU2-U01] is able to formulate and solve complex and unusual problems regarding the functioning of individual components of the marine environment using knowledge from various fields and scientific disciplines and propose solutions	Student knows and applies the rules of ethics, intellectual honesty, and is aware of the importance of professionalism at workplace.	[SU1] oral statement/conversation/discussion
	[OCEANMU2-W06] knows and identifies potential threats to the marine environment on a local and global scale resulting from strong anthropopressure, predicts their effects on various time and space scales	Student represents well-grounded knowledge on terminology describing ecological processes and is capable of understanding ecological processes (natural, human-driven) in the marine environment. This knowledge allows for skillfull navigation in the scientific literature (polish and english), in order to develop their career in academia or environmental consulting agencies.	[SW3] text preparation/written work
	[OCEANMU2-U02] can use scientific terminology fluently and appropriately in presenting and discussing problems in the field of oceanography	Well-established knowledge that will allow to expand the knowledge of ecological processes in the marine environment to include other aspects, including socio-economic and legal matters, and use them to build and promote a holistic approach to ecological education, conducting scientific research or proposing new solutions in the management of marine resources.	[SU2] 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)	Knowledge of marine ecology terminology allows for understanding contemporary ecological problems and creating new concepts in the study of ecological processes in marine ecology and readiness for social education in the light of marine ecological awareness.	[SW2] presentation/project/paper/report
	[OCEANMU2-K02] is ready to take full responsibility in terms of actions taken and compliance with professional ethics and principles intellectual honesty, is aware of the importance professional approach in every situation	Knowledge of ecological processes in order to to describe and present an overview of ecological processes and the ability to present selected ecological problems.	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
Subject contents	1 Adaptations and reactions of the aquatic organisms (behavior, metabolic rate, mortality) to the changes in environmental factors such as salinity, sediment type, temperature. 2. Growth and development dynamics of marine organisms across different biogeographic regions. 3. Colonization and succession of macrobenthic epifauna on hard substrates.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Report (reporting activities from each laboratory project)	51.0%	40.0%
	Test (at the beginning of every class)	51.0%	40.0%
	Final test (written examination)	51.0%	20.0%

Recommended reading	Basic literature	Kinne O., 1977. Marine Ecology vol. I i II John Wiley and Sons Ltd, New York Odum E.P., 1953. Fundamentals of ecology. Saunders, Philadelphia, or any republished version Karasov W.H., Martinez del Rio C., 2007, Physiological ecology. Princeton University Press, Princeton Kaiser M., Attrill M., Jennings S., Thomas D.N., Barnes D., Brierley A., Polunin N., Raffaelli D., Williams P.L.B., 2005, Marine Ecology: Processes, Systems, and Impacts. Oxford University Press, Oxford Snoeijs-Leijonmalm P., Schubert H., Radziejewska T., 2017, Biological Oceanography of the Baltic Sea. Springer Science and Business Media, Dordrecht Schiewer U., 2008, Ecology of Baltic coastal waters. Springer, Berlin Kaiser M., Attrill M., Jennings S., Thomas D.N., Barnes D., Brierley A., Polunin N., Raffaelli D., Williams P.L.B., 2005, Marine Ecology: Processes, Systems, and Impacts. Oxford University Press, Oxford Schiewer U., 2008, Ecology of Baltic coastal waters. Springer, Berlin and other relevant scientific publications
	Supplementary literature	Wilkinson D.M., 2007, Fundamental processes in ecology. An earth systems approach. Oxford University Press, Oxford Thurman H., 1993. Essentials of oceanography. Macmillan, New York
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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