University of Gdańsk

Subject card

Subject name and code	Marine ecology - laboratory exercises, PG_00044099						
Field of study	Oceanography						
Date of commencement of studies	October 2024		Academic year of realisation of subject	2024/2025			
Education level	postgraduate studies		Subject group	Obligatory subject group 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 Polish			
Semester of study	1		ECTS credits	4.0			
Learning profile	academic		Assessment form				
Conducting unit	Katedra Funkcjonowania Ekosystemów Morskich -> Faculty of Oceanography and Geography						
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						
	Additional information: Laboratory activities including independent experiment conducting and/or utilisation of existing databases for data interpretation and drawing relevant conclusions.						
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 knowledge on 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	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.	[SU1] oral statement/conversation/ discussion
[OCEANMU2-U02] can use scientific terminology fluently and appropriately in presenting and discussing problems in the field of oceanography	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.	[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)	Student represents well-grounded knowledge on terminology describing ecological processess and is capable of understanding ecological processess (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 enironmental consulting agencies.	[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	Student knows and applies the rules of ethics, intelectual honesty, and is aware of the importance of professionalism at workplace.	[SK1] oral statement/conversation/ discussion [SK8] observation of student's independent or team work
[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	Knowledge of ecological processes in order to to describe and present an overview of ecological processes and the ability to present selected ecological problems.	[SW3] text preparation/written 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
Test (at the beginning of every class)	51.0%	40.0%
Report (reporting activities from each labratory project)	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 YorkOdum E.P., 1953. Fundamentals of ecology. Saunders, Philadelphia, or any republished versionKarasov W.H., Martinez del Rio C., 2007, Physiological ecology. Princeton University Press, PrincetonKaiser 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, OxfordSnoeijs-Leijonmalm P., Schubert H., Radziejewska T., 2017, Biological Oceanography of the Baltic Sea. Springer Science and Business Media, DordrechtSchiewer U., 2008, Ecology of Baltic coastal waters. Springer, BerlinKaiser 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, OxfordSchiewer U., 2008, Ecology of Baltic coastal waters. Springer, Berlinand other relevant scientific publications
	Supplementary literature	Wilkinson D.M., 2007, Fundamental processes in ecology. An earth systems approach. Oxford University Press, OxfordThurman H., 1982, Zarys oceanologii. Wydawnictwo Morskie, Gdańsk
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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