University of Gdańsk

Subject card

Subject name and code	Biological assessment of marine ecosystem health - conversatory, PG_00054208		
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
Semester of study	1	ECTS credits	1.0
Learning profile	academic	Assessment form	
Conducting unit	Katedra Ekologii Morza -> Faculty of Oceanography and Geography		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Urszula Janas	
	Teachers		

Lesson types							
	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
	Additional information: Learning methods: lecture with multimedia presentation, discussion, Team Based Learning and Problem Based Learning methods						

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	15	1.0	14.0	30

Subject objectives	
	Develop an understanding of the assessment of threats to the marine environment from human activities and methods to biologically assess the quality and sustainability of the marine environment. To learn about the effects of stressors on different levels of biological organization

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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	He or she knows and understands the basic legal regulations, principles of sustainable development of the marine environment, its protection and management of the marine environment and its resources necessary for biological assessment of environmental quality	[SW4] test/exam - oral or written
	[OCEANMU2-K04] is ready to critically evaluate his/her knowledge and received content in the field of natural sciences in in particular in the field of the studied specialty, a in problematic situations, supports oneself with knowledge experts	He or she is ready to critically evaluate his knowledge and perceived content of the of marine environmental quality assessment,	[SK1] 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	He or she knows and identifies potential threats to the marine environment at the scale of local and global resulting from strong anthropopression, predicts their effects	[SW4] test/exam - oral or written

Subject contents

Discussion on the need to develop tools for biological assessment of marine environmental quality, terms quality/integrity/sustainability/health of the ecosystem, problems of interpretation and use of bio-indicators and biomarkers;Bioindicators and biomarkers as tools for assessing marine environmental quality, types of in situ biomonitoring and development directions, criteria for selecting species for biomonitoring;Assessment of the quality of European waters in accordance with the Water Framework Directive and the Marine Strategy Framework Directive with a focus on marine benthic communities;Division and use of biomarkers to assess the impact of stress factors on organisms in the marine environment;Case studies using the DPSiR model to assess threats to the integrity/sustainability of the marine environment, selection of biological indicators for assessing changes in the marine environment, and seeking solutions to improve the quality of marine ecosystems

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
completion of a credit work - project or presentation	51.0%	25.0%
written exam with open-ended questions (tasks)	51.0%	50.0%
completion of the credit work-work with the article	51.0%	25.0%

Recommended reading

Basic literature	Gray J., Elliott M., 2010, Ecology of Marine sediments from science to management, Oxford University Press. Walker C.H., Hopkin S.P., Sibly R.M., Peakall D.B., 2012. Principles of ecotoxicology, CRC Press, pp. 386 HELCOM, 2010, Hazardous substances in the Baltic Sea An integrated thematic assessment of hazardous substances in the Baltic Sea. Balt. Sea Environ. Proc. No. 120B.
Supplementary literature	www.helcom.fi
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed

Work placement	Not applicable

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