

**Subject card**

Subject name and code	, PG_00121056						
Field of study	Oceanography						
Date of commencement of studies	October 2024	Academic year of realisation of subject				2025/2026	
Education level	postgraduate studies	Subject group				Optional subject group	
Mode of study	full-time studies	Mode of delivery				at the university	
Year of study	2	Language of instruction				Polish	
Semester of study	4	ECTS credits				2.0	
Learning profile	academic	Assessment form					
Conducting unit	Pracownia Biotechnologii Morskiej -> Katedra Biologii Morza i Biotechnologii -> Faculty of Oceanography and Geography						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Hanna Mazur Marzec				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	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	30		7.5		20.0	57,5
Subject objectives	Students get acquainted with the biotechnological potential of marine natural products, e.g. in such sectors as aquaculture, pharmacy, cosmeceutical and food industry sector						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[OCEANMU2-K04] is ready to critically evaluate his/her knowledge and received content in the field of natural sciences in particular in the field of the studied specialty, a in problematic situations, supports oneself with knowledge experts	Use the most recent published resources describing the biotechnological potential of marine natural products			[SK5] implementation of a problem task		
	[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	Student knows and is able to characterized marine natural products			[SW2] presentation/project/paper/report		
	[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 perform the analysis of marine natural products market			[SU2] presentation/project/paper/report		
Subject contents	Short history and basic concepts of marine biotechnology. Selected marine natural products applied in such sector as energy, food, feed, biomaterials, food supplements, cosmetics, pharmaceuticals, Marine organisms as a source of marine natural products of commercial application. Assessment of commercial potential of marine natural products.						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	The final assessment is based on the partial marks.	51.0%	100.0%
Recommended reading	Basic literature	Hiromasa Kiyota, 2021. Marine Natural Products. Wyd. Springer	
	Supplementary literature	Selected articles published in Marine Drugs  Se-Kwon Kim, 2019. Essential of Marine Biotechnology. Wyd. Springer	
	eResources addresses	Adresy na platformie eNauczenie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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