

Subject card

Subject name and code	Principles of marine biotechnology - e-learning course, PG_00121056						
Field of study	Oceanography						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
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	2		Language of instruction		English		
Semester of study	4		ECTS credits		2.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Marine Biology and Biotechnology -> Faculty of Oceanography and Geography -> Rector						
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	Acquiring knowledge about the possibilities of biotechnological use of products from marine organisms.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[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 analyse and synthetically develop experimental results and propose correct conclusions		[SU1] oral statement/conversation/discussion [SU3] text preparation/written work [SU8] observation of student's independent or team work		
	[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		Knows and understands in-depth the latest research trends in the field of marine biotechnology.		[SW3] text preparation/written work		
	[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		is ready to critically evaluate information obtained from scientific publications in the field of marine biotechnology		[SK1] oral statement/conversation/discussion [SK3] text preparation/written work [SK8] observation of student's independent or team work		
Subject contents	B.1. Selected products of marine organisms used by humans (including as a source of energy, bioplastics, pharmaceuticals, dietary supplements, nutraceuticals, cosmetics) B.2. Methods of obtaining natural products for commercial purposes B. 3. Assessment of the possibilities of biotechnological application of products of marine organisms B. 4. Identification and isolation of natural products B. 5. Implementation stages and application of marine natural products in biotechnology and pharmacology						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	completing a term paper - project or presentation	51.0%	100.0%
Recommended reading	Basic literature	Se-Kwon Kim., 2015. Handbook of Marine Biotechnology. Springer Selected articles from the journal Marine Drugs and Marine Biotechnology	
	Supplementary literature	Selected articles from the journal Marine Drugs and Marine Biotechnology	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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