University of Gdańsk

Subject card

Subject name and code	Principles of marine biotechnology - e-lerning 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

Master the knowledge of the possibilities of biotechnological use of products of marine organisms.

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 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 publications scientific publications in the field of marine biotechnology	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report
[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 to an in-depth degree the latest research trends in the field of marine biotechnology.	[SW1] oral statement/ conversation/discussion [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	can analytically and synthetically elaborate the results of experiments and propose correct conclusions	[SU2] presentation/project/paper/ report

<table>
<tr><td>Subject contents</td><td colspan="3">B.1. Selected products of marine organisms used by humans (including as a source of energy, bioplastics, pharmaceuticals, dietary supplements
diets, nutraceuticals, cosmetic agents)
B.2. Methods of obtaining natural products for commercial purposes
B. 3. Assessment of the possibility of biotechnological application of products of marine organisms
B. 4. Identification and isolation of natural products
B. 5. Stages of implementation and application of marine natural products in biotechnology and pharmacology</td></tr>
<tr><td>Prerequisites and co-requisites</td><td colspan="3"></td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>determination of a passing grade on the basis of partial grades received during the semester</td><td>51.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Se-Kwon Kim., 2015. Handbook of Marine Biotechnology. Springer
Selected articles from the journal Marine Drugs and Marine Biotechnology</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Selected articles from the journal Marine Drugs and Marine Biotechnology</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3"></td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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