University of Gdańsk

Subject card

Subject name and code	Biomolecules - lecture, PG_00199612		
Field of study	Oceanography		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
Education level	Bachelor'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	Polish
Semester of study	4	ECTS credits	2.0
Learning profile	academic	Assessment form	exam
Conducting unit	Laboratory of Marine Biotechnology -> 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	2.0	18.0	50

Subject objectives

Students aquire basic knowledge about marine biomolecules, their sources, structure, properties, biosynthetic pathways and significance in the functioning of marine organisms and the environment. Students wil understand the role and application of marine biomolecules in environmental studies and human life.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANL3-W02] has a broad knowledge and understanding of physical, biological, chemical, and geological processes and phenomena occurring in aquatic environments, with particular emphasis on the marine environment	Student knows and understands basic biological processes related to the synthesis, properties and significance of biomolecules occurring in marine environment	[SW4] test/exam - oral or written

Subject contents

Chemical evolution and their role in evolution of life on Earth, chemical bonds in organic molecules, hydrocarbons - clasification, structure, properties, isomery and its biological significance, amino acids, peptides, proteins (enzymes, hemoglobine and other oxigen transporting proteins, colagen), nucleic acids, carbohydrates, lipids, fatty acids - structure, function, environmental significance; pronciples of immunology, application of antibodies in natural sciences.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Exam	51.0%	100.0%

Recommended reading

Basic literature	Bańkowski E., 2020, Biochemia Wyd.: Edra Urban&Partner; John McMurry. PWN, Ferrier D.R., 2021, Biochemia, Wyd. Edra Urban & Partner.
Supplementary literature	Tymoczko J.L., Berg J.M., Stryer L., 2018. Biochemia. Wydawnictwo Naukowe PWN.

	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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