

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 acquire basic knowledge about marine biomolecules, their sources, structure, properties, biosynthetic pathways and significance in the functioning of marine organisms and the environment. Students will 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 - classification, structure, properties, isomerism and its biological significance, amino acids, peptides, proteins (enzymes, hemoglobins and other oxygen transporting proteins, collagen), nucleic acids, carbohydrates, lipids, fatty acids - structure, function, environmental significance; principles 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, Ferrer 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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