

**Subject card**

Subject name and code	Sociomicrobiology, PG_00099394						
Field of study	Marine Biotechnology						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2025/2026		
Education level	postgraduate studies	Subject group					
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			1.0		
Learning profile	academic	Assessment form					
Conducting unit	Dziekanat MW Biotechnologii -> Intercollegiate Faculty of Biotechnology UG-MUG						
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. Michał Obuchowski					
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	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	15		2.0		10.0	27
Subject objectives	<p>The student understands the need to adopt a new way of perceiving microorganisms not as individual cells, but as a functionally connected community (BIOTECHL3_W01). Is capable of demonstrate the need to study certain processes and behaviors of microorganisms in the context of entire populations bacteria and not single cells (BIOTECHL3_W03). Understands the limitations in understanding the collective bacteria caused by the use of laboratory methods of cultivating microorganisms (BIOTECHL3_K01). Is able to plan a sequence of works enabling the analysis of the social behavior of microorganisms.</p>						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[MBMU2-KW04] Knows and deeply understands advanced research methods used in marine biotechnology and related sciences		The student understands the selected ones biological phenomena at the level molecular. He knows their capabilities applications in biotechnology.		[SW4] test/exam - oral or written		
	[MBMU2-KW03] Knows and understands complex biological phenomena at the molecular level, understands their significance for an organism, marine environment and marine biotechnology		The student is aware of the limitations knowledge describing the world microorganisms. He needs her constant dredging.		[SW4] test/exam - oral or written		
	[MBMU2-KK01] Is ready to critically evaluate his knowledge and continuously improve, update and upgrade his skills in the field of marine biotechnology		The student notices and understands interdependencies between microorganisms and between microorganisms and the environment.		[SK4] test/exam - oral or written		
Subject contents	<p>Revision of the dogma that bacteria are single-celled organisms in the light of the results research in recent years. The issue of individuality of bacterial cells in a genetically homogeneous population. The importance of the sense of density for group behavior of microorganisms and communication interspecies. Biofilm - a sessile community of bacteria. Functional specialization within the biofilm bacterial. Coordinated movement of bacteria as a manifestation of collective pursuit of a goal. Cannibalism as how the population behaves. Altruistic death among bacteria.</p>						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Final colloquium	51.0%	100.0%
Recommended reading	Basic literature	Review articles on issues discussed during the lecture provided by the instructor during the classes. "Sociomicrobiology" script.	
	Supplementary literature	None	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

Document generated electronically. Does not require a seal or signature.