

Subject card

Subject name and code	Microbial biotechnology - laboratory classes, PG_00192712						
Field of study	Marine Biotechnology						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2026/2027		
Education level	Master's studies	Subject group			Obligatory subject group in the field of study		
Mode of study	full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			English		
Semester of study	1	ECTS credits			2.0		
Learning profile	academic	Assessment form			credit		
Conducting unit	Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr n. med. Dorota Pomorska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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	<p>The course aim is:</p> <p>Acquisition by students of knowledge concerning microbial biotechnological methods applied to solve problems in life science. (KW_04). Acquisition of the ability to prepare and make in English a short oral presentation, using scientific language, including specialist terminology and notional apparatus suitable for the conducted research, and to participate in a discussion (KU_03). Student will be aware of risks and dilemmas connected to scientific research and laboratory work (KK04).</p>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[MBMU2-KK02] Is ready to effectively plan and organize his individual and team work, especially in the laboratory and at sea; is ready to plan his individual career and act in an entrepreneurial manner	KK_02 Can effectively plan and organize personal and team work in the laboratory and at sea	[SK2] presentation/project/paper/report [SK4] test/exam - oral or written [SK6] demonstration of practical skills [SK8] observation of student's independent or team work
	[MBMU2-KK03] Is ready to apply the principles of occupational health and safety, especially in the laboratory and at sea; is responsible for their own and others' safety; can recognize hazards and take appropriate action	KK_03 Is able to apply the Health and Safety rules during working in the laboratory and during sea expedition; is prepared to take full responsibility for his own safety and for safety of others, and is able to recognize threats, and is capable of taking appropriate actions.	[SK2] presentation/project/paper/report [SK4] test/exam - oral or written [SK6] demonstration of practical skills [SK8] observation of student's independent or team work
	[MBMU2-KU01] Can plan and conduct research in the laboratory and at sea, and to document procedures and results. Independently or under the supervision of an authorized staff member, carries out work using specialized equipment. Complies with occupational health and safety regulations.	KU_01 Can organize and realize research in the laboratory and at sea and can document activities and results; is able to use laboratory devices under the supervision of the tutor; applies the Health and Safety Rules	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
Subject contents	The course covers an overview of current important microbial biotechnology methods used in bioscience. The course includes an overview of microbes (e.g., bacteria, viruses and yeast) and genetic engineering technics that have found practical application in microbial biotechnology and help to deal with various bioscience issues		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Test	51.0%	60.0%
	Raport	51.0%	30.0%
	Activity	51.0%	10.0%
Recommended reading	Basic literature	Molecular cloning - A laboratory manual by Sambrook, Fritsch and Maniatis Molecular cloning - A laboratory manual. 4th edition, (2012) Green, Sambrook Microbial Biotechnology: Fundamentals of Applied Microbiology 2nd Edition, (2007), Glazer, Nikaido	
		Materials prepared by lecturers and students	
	Supplementary literature	Freely selected books and articles, that can expand knowledge in the topic	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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