University of Gdańsk

Subject card

Subject name and code	Microbial biotechnology - laboratory classes, PG_00192712						
Field of study	Marine Biotechnology						
Date of commencement of studies	October 2027		Academic year of realisation of subject	2027/2028			
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	The course aim is: 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).						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[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
[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

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
Activity	51.0%	10.0%
Raport	51.0%	30.0%
Test	51.0%	60.0%

Recommended reading

Basic literature	Molecular cloning - A laboratory manual by Sambrook, Fritsch and Maniatis Molecular cloning - A laboratory manual. 4thedition, (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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