University of Gdańsk

Subject card

Subject name and code	Microbial biotechnology - tutorials, PG_00192711						
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	Department of Marine Biology and Biotechnology -> 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	30.0	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		1.0		19.0	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-KW04] Knows and deeply understands advanced research methods used in marine biotechnology and related sciences	KW_04 Knows and understands well advanced research methods used in marine biotechnology and related sciences	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
[MBMU2-KK04] Is ready to assess and understand the risks and dilemmas, including ethical dilemmas associated with conducting scientific research and introduction of advanced technologies; understands and appreciates the importance of intellectual property; acts ethically	KU_03 Understands an utterance and reads with understanding scientific literature and simple reviews in the fields of science and scientific disciplines connected with marine biotechnology; can prepare a short written review and an oral presentation in English (using scientific language), concerning particular issues of marine biotechnology and related scientific areas and disciplines, has an ability to participate in a discussion	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report
[MBMU2-KU03] Can use and critically analyze available scientific information; can prepare and present - orally or in writing - a paper covering detailed problems in the field of marine biotechnology on the basis of the scientific information or their own work, with the use of scientific language, including specialized terminology and conceptual apparatus; has the ability to conduct discussions	KK_04 Is ready to assess and understand the risks and dilemmas, including ethical dilemmas, associated with conducting scientific research and introducing advanced technologies; understands and appreciates the importance of intellectual property; behaves ethically	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report

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

Knowledge, skills and competences as the learning outcomes of the first - cycle studies in the field of oceanography or biotechnology or similar learning outcomes obtained in another field of study

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	51.0%	80.0%
	51.0%	20.0%

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 prepare by tutor and students
Supplementary literature	Freely choosen materials that can extand knowledge on the studied topis
eResources addresses	

Example issues/ example questions/ tasks being completed

Work placement

Not applicable

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