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 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	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).						

<table>
<tr><td>Learning outcomes</td><td>
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<tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr>
<tr><td>[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</td><td>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</td><td>[SU1] oral statement/conversation/ discussion
[SU2] presentation/project/paper/ report</td></tr>
<tr><td>[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</td><td>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</td><td>[SK1] oral statement/conversation/ discussion
[SK2] presentation/project/paper/ report</td></tr>
<tr><td>[MBMU2-KW04] Knows and deeply understands advanced research methods used in marine biotechnology and related sciences</td><td>KW_04 Knows and understands well advanced research methods used in marine
biotechnology and related sciences</td><td>[SW1] oral statement/ conversation/discussion
[SW2] presentation/project/paper/ report</td></tr>
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<tr><td>Subject contents</td><td>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.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>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</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td></td><td>51.0%</td><td>20.0%</td></tr>
<tr><td></td><td>51.0%</td><td>80.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>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</td></tr>
<tr><td>Supplementary literature</td><td>Freely choosen materials that can extand knowledge on the studied topis</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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