University of Gdańsk

Subject card

Subject name and code	Microbiology - laboratory exercises, PG_00091499		
Field of study	Water Management and Protection of Water Resources		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	undergraduate studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study Subject group related to practical vocational preparation
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	2.0
Learning profile	practical	Assessment form	
Conducting unit	Pracownia Biotechnologii Morskiej -> Katedra Biologii Morza i Biotechnologii -> Faculty of Oceanography and Geography		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Anna Toruńska-Sitarz	
	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	5.0	15.0	50

Subject objectives

Learning the basic principles of working in a microbiology laboratory, implementing microbiological methods and techniques; and basics of microorganism isolation, culture, and identification.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GWOZWL3-U02] select and independently apply basic research techniques and tools, with adhering to established analytical procedures in the field of environmental research in water management, adequately to the considered research problem	U_2 [K_U02] Students are able to select and independently apply basic techniques and research tools used in microbiology, adequately to the considered research problem.	[SU3] text preparation/written work [SU4] test/exam - oral or written
[GWOZWL3-K05] take responsibility for the safety of their own work and that of others, dealing with emergencies, exercising caution in the laboratory and in the field, responsibility for entrusted equipment and apparatus	K_1 [K_K05] The student is ready to take responsibility for the safety of his/her own and others' work, to deal with emergencies, to be cautious in the microbiology laboratory, to be responsible for the equipment.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written

<table>
<tr><td>Subject contents</td><td>1. Basic working principles in the microbiology laboratory.2. Methods of microbial isolation and culture.3. Identification of microorganisms based on classical and modern methods.4. Quantitative analysis of aquatic microorganisms.5. Bacteriological water analysis.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>none</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>Practical assessment</td><td>51.0%</td><td>20.0%</td></tr>
<tr><td>Report</td><td>51.0%</td><td>20.0%</td></tr>
<tr><td>Short tests</td><td>51.0%</td><td>60.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Script prepared by the Lecturer.</td></tr>
<tr><td>Supplementary literature</td><td>Różalski A., Ćwiczenia z mikrobiologii ogólnej. Skrypt dla studentów biologii, Wydawnictwo Uniwersytetu Łódzkiego; Mierzejewska J., Chreptowicz K., Mikrobiologia ogólna i przemysłowa. Ćwiczenia laboratoryjne, Oficyna Wydawnicza Politechniki Warszawskie.</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</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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