

Subject card

Subject name and code	Aquaculture Microbiology - lecture, PG_00201307						
Field of study	Aquaculture – Business And Technology						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2027/2028		
Education level	Bachelor's studies	Subject group			Obligatory subject group 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	2	Language of instruction			Polish		
Semester of study	3	ECTS credits			2.0		
Learning profile	practical	Assessment form			exam		
Conducting unit							
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	30.0	0.0	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		2.0		18.0	50
Subject objectives	To learn about the various groups of aquatic microorganisms and the nature of their interactions with other organisms. To learn about the role of microorganisms occurring in aquaculture systems of higher organisms and the ways they can be used to improve aquaculture practices.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[AKWAL3_W03] has an advanced understanding of the conceptual categories and terminology related to the biological basis of aquatic organisms breeding, as well as concepts directly relevant to the practical applications of this knowledge		W_1 [K_W03] The student knows and understands the diversity of aquatic microorganisms, as well as the conceptual categories and terminology related to the biological foundations of their cultivation, along with the concepts directly applicable to the practical use of this knowledge.			[SW4] test/exam - oral or written	

Subject contents	<p>1. Structure, diversity and ecological functions of aquatic microorganisms.</p> <p>2. Mechanisms regulating the abundance, biomass and diversity of microorganisms.</p> <p>3. Methods used in microbiological studies.</p> <p>4. Microbiological processes and water quality in aquaculture.</p> <p>5. Use of "beneficial microorganisms" in aquaculture (probiotics, feed, sensors etc.)</p> <p>6. Pathogenic microorganisms in aquaculture.</p>											
Prerequisites and co-requisites	none											
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="456 786 794 815">Subject passing criteria</th> <th data-bbox="798 786 1136 815">Passing threshold</th> <th data-bbox="1139 786 1477 815">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="456 819 794 848">Exam</td> <td data-bbox="798 819 1136 848">51.0%</td> <td data-bbox="1139 819 1477 848">80.0%</td> </tr> <tr> <td data-bbox="456 853 794 882">Group work (active learning)</td> <td data-bbox="798 853 1136 882">51.0%</td> <td data-bbox="1139 853 1477 882">20.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Exam	51.0%	80.0%	Group work (active learning)	51.0%	20.0%
Subject passing criteria	Passing threshold	Percentage of the final grade										
Exam	51.0%	80.0%										
Group work (active learning)	51.0%	20.0%										
Recommended reading	<table border="1"> <tbody> <tr> <td data-bbox="456 898 794 972">Basic literature</td> <td colspan="2" data-bbox="798 898 1477 972">Mikrobiologia ogólna H.G. Schlegel; Mikrobiologia środowisk M.K. Błaszczyk; Aquaculture Microbiology and Biotechnology D. Montet, R.C. Ray; Scientific papers</td> </tr> <tr> <td data-bbox="456 976 794 1050">Supplementary literature</td> <td colspan="2" data-bbox="798 976 1477 1050">Mikrobiologia wód G. Rheinheimer; Łowcy mikrobów P. de Kruif; Beneficial Microorganisms in Agriculture, Aquaculture and Other Areas M.T.Liong</td> </tr> <tr> <td data-bbox="456 1055 794 1084">eResources addresses</td> <td colspan="2" data-bbox="798 1055 1477 1084"></td> </tr> </tbody> </table>			Basic literature	Mikrobiologia ogólna H.G. Schlegel; Mikrobiologia środowisk M.K. Błaszczyk; Aquaculture Microbiology and Biotechnology D. Montet, R.C. Ray; Scientific papers		Supplementary literature	Mikrobiologia wód G. Rheinheimer; Łowcy mikrobów P. de Kruif; Beneficial Microorganisms in Agriculture, Aquaculture and Other Areas M.T.Liong		eResources addresses		
Basic literature	Mikrobiologia ogólna H.G. Schlegel; Mikrobiologia środowisk M.K. Błaszczyk; Aquaculture Microbiology and Biotechnology D. Montet, R.C. Ray; Scientific papers											
Supplementary literature	Mikrobiologia wód G. Rheinheimer; Łowcy mikrobów P. de Kruif; Beneficial Microorganisms in Agriculture, Aquaculture and Other Areas M.T.Liong											
eResources addresses												
Example issues/ example questions/ tasks being completed												
Work placement	Not applicable											

Document generated electronically. Does not require a seal or signature.