

**Subject card**

<b>Subject name and code</b>	High Value-added Products - laboratory classes, PG_00201259						
<b>Field of study</b>	Aquaculture – Business And Technology						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2028/2029		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Subject group related to practical vocational preparation		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	3	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	6	<b>ECTS credits</b>			2.0		
<b>Learning profile</b>	practical	<b>Assessment form</b>			credit		
<b>Conducting unit</b>							
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		prof. dr hab. Hanna Mazur-Marzec				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	0.0	0.0	30.0	0.0	0.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	30		2.0		18.0	50
<b>Subject objectives</b>	Acquiring practical skills in the use of aquaculture to obtain products with high added value						
<b>Learning outcomes</b>	<b>Course outcome</b>		<b>Subject outcome</b>			<b>Method of verification</b>	
	[AKWAL3-U06] can apply basic techniques and technological processes related to the use of elements of the environment for practical purposes		is able to apply basic techniques used in isolation and chemical analyzes of natural products obtained from aquaculture			[SU2] presentation/project/paper/report [SU4] test/exam - oral or written [SU6] demonstration of practical skills	
<b>Subject contents</b>	- Optimization of the production of compounds with potential biotechnological applications by aquatic organisms - Application of biochemical methods in assessing the suitability of natural products - Application of chemical methods for extraction, isolation and analysis of natural products						
<b>Prerequisites and co-requisites</b>							
<b>Assessment methods and criteria</b>	<b>Subject passing criteria</b>		<b>Passing threshold</b>			<b>Percentage of the final grade</b>	
	test		51.0%			34.0%	
	- completion of final work - completion of specific practical work		51.0%			33.0%	
	completing a final paper - conducting research and presentation their results		51.0%			33.0%	
<b>Recommended reading</b>	<b>Basic literature</b>		1. Garth L. Fletcher, Matthew L. Rise, 2012. Aquaculture biotechnology. John Wiley & Sons, Ltd. 2. Se-Kwon Kim., 2015. Handbook of Marine Biotechnology. Springer 3. Other materials recommended by the employee conducting the classes				
	<b>Supplementary literature</b>		Other materials recommended by the employee conducting the classes				
	<b>eResources addresses</b>						

Example issues/ example questions/ tasks being completed	Isolation and analysis of chemical natural products obtained from aquaculture
Work placement	Not applicable

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