University of Gdańsk

Subject card

Subject name and code	Water and Wastewater Treatment Technologies - laboratory classes, PG_00201279						
Field of study	Aquaculture – Business And Technology						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2026/2027		
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	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		2.0		
Learning profile	practical		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Natalia Gruba				
	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		2.0		18.0	50
Subject objectives	Familiarizing students with technologies for purifying water and post-production waste in aquaculture Introduce students to selected devices used to purify water and post-production waste in aquaculture						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[AKWAL3-U02] can make observations and perform simple physical / biological / chemical measurements that are typical in socio-economic activity based on natural sciences	can carry out observations and perform simple chemical measurements typical of processes used in water purification technology and life science-based post-production waste; (Contents program: B)	[SU2] presentation/project/paper/ report [SU6] demonstration of practical skills
[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 and technological processes related to the use of environmental elements for practical purposes; (Contents program: B)	[SU2] presentation/project/paper/ report [SU6] demonstration of practical skills
[AKWAL3-K02] is ready to take responsibility for the work of the team and its safety; knows how to make decisions and how to act in different situations	is ready to take responsibility for the team's work the use of techniques and tools for the purification of water and products post-production, for safety, knows how to make decisions and act in... various situations; (Program content: B)	[SK8] observation of student's independent or team work
[AKWAL3_W02] has an advanced understanding of chemical, biological, physical processes and phenomena, identifies them, analyses their mechanisms in relation to the aquatic environment, and is aware of the connections between various natural disciplines	knows and understands chemical, biological and physical processes and phenomena used in water and post-production waste treatment technology, analyzes their course in relation to the aquatic environment and is aware connections between various natural science disciplines; (Program content: B)	[SW4] test/exam - oral or written
[AKWAL3_W06] has an advanced understanding of techniques, research methods and tools used in aquaculture	knows and discusses techniques, research methods and tools used in water and post-production waste treatment technology used in aquaculture (Program content: B)	[SW4] test/exam - oral or written

Subject contents

B. Laboratory issues: physicochemical characterization of water and wastewater from aquaculture facilities; exercises simulating sample technological processes used to purify water and post-production waste (coagulation and flocculation; mechanical filtration and sorption; advanced disinfection and oxidation methods)

Prerequisites and co-requisites

Basics of inorganic and organic chemistry

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test	51.0%	50.0%
performing a specific job practical and presentation of results in the form of a report (written)	51.0%	50.0%

Recommended reading

Basic literature	The lecture is original and based on numerous original publications, unpublished materials and own research
Supplementary literature	none
eResources addresses	

Example issues/ example questions/ tasks being completed

Water treatment technologies using UV and H2O2

Work placement

Not applicable

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