

Subject card

Subject name and code	Ecotoxicology in aquaculture - laboratory exercises, PG_00075870						
Field of study	Aquaculture – Business And Technology						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2025/2026		
Education level	undergraduate studies	Subject group					
Mode of study	full-time studies	Mode of delivery			at the university		
Year of study	2	Language of instruction			Polish Polish		
Semester of study	3	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 Agata Błaszczuk				
	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		3.0		17.0	50
Subject objectives	To introduce students to the effects of anthropogenic pollution and natural substances on organisms cultivated in aquaculture (ecotoxicological tests, toxicity assessment, biomarker studies). To learn about environmental risk assessment methods.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[AKWAL3_W03] knows and understands 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] student knows and understands the conceptual categories and terminology concerning the effects of anthropogenic pollution and natural substances on organisms in aquaculture. student knows and understands concepts directly relevant to the practical applications of this knowledge [A1-A3].		[SW4] test/exam - oral or written [SW3] text preparation/written work		
	[AKWAL3-U07] can come to the right conclusions on the basis of available data		U_2 [K_U07] student is able to make correct conclusions on the basis of ecotoxicological tests [A1-A2].		[SU8] observation of student's independent or team work		
	[AKWAL3-U02] can make observations and perform simple physical / biological / chemical measurements that are typical in socio-economic activity based on natural sciences		U_1 [K_U02] student is able to make observations and measurements concerning the effects of pollutants on farm organisms [A1-A3].		[SU8] observation of student's independent or team work		
	[AKWAL3-K03] is ready to follow the ethical principles in biological research and adhere to the principles of intellectual honesty		K_1 [K_K03] student is ready to respect the principles of ethics in ecotoxicological studies ecotoxicology research and to observe the principles of intellectual honesty [curricular content [A1, A2]		[SK8] observation of student's independent or team work		

Subject contents	1 Ecotoxicological tests in toxicological risk assessment.2. Biomarkers in the assessment of exposure and effects.3. Detection and characterisation of harmful substances by chemical methods.		
Prerequisites and co-requisites	not required		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	exam	51.0%	100.0%
Recommended reading	Basic literature	1. Walker C.H., Hopkin S.P., Sibly R.M., Peakall B., 2002. Podstawy Ekotoksykologii, PWN, Warszawa 2. Laskowski R., Migula P., 2004. Ekotoksykologia od komórki do ekosystemu, Państwowe Wyd. Rolnicze i Leśne, Warszawa 3. Klaassen J.B., Watkins III J.B., 2014. Podstawy Toksykologii, MedPharm Polska 4. Manahan S.E., 2006. Toksykologia środowiska. PWN, Warszawa 5. Cole D.W., Cole R., Gaydos S.J., Gray J., Hyland G., Jacques M.L., Powell-Dunford N., Sawhney C., Au W.W. 2009. Aquaculture: Environmental, toxicological, and health issues. Int. J. Hyg. Environ. Health 212 (2009) 369377	
	Supplementary literature	-	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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