University of Gdańsk

Subject card

Subject name and code	Hydroecology - laboratory classes, PG_00201224						
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		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	1		ECTS credits		3.0		
Learning profile	practical		Assessment form		credit		
Conducting unit	Department of Marine Ecosystems Functioning -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Aleksandra Zgrundo				
	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		43.0	75
Subject objectives	Introduction to ecology as a scientific discipline utilizing specialized terminology and research methodologies. The course presumes that, in addition to mastering fundamental concepts and techniques pertinent to the investigation of ecological systems, the student will grasp the significance of abiotic and biotic factors, as well as the processes that shape the structure and function of ecosystems.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[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	Students understand and correctly describe the basic chemical / biological / physical processes and phenomena, analyze them in relation to the aquatic environment	[SW1] oral statement/ conversation/discussion
[AKWAL3_W01] has an advanced understanding of the links between achievements in selected fields of science and natural science disciplines, and their potential applications in socio-economic life	Students understands and correctly describe the relationships between the achievements of sciences and disciplines of natural sciences used in ecology and the possibility of using them in socio-economic life.	[SW3] text preparation/written work
[AKWAL3-K01] is ready to assess the risks and threats stemming from working in the laboratory and is responsible for the equipment and teaching materials entrusted to them and for the safety of their own work and that of others	Students are able to cooperate and work in a team, taking on different roles	[SK8] observation of student's independent or team work
[AKWAL3-U01] can plan and perform simple tasks under supervision or independently in the analysis of the aquatic environment, using appropriate methods of description and identification	Students perform simple scientific tasks related to the analysis of aquatic environment by using the appropriate descriptive and identification methods, under the supervision of academic advisor or individually	[SU8] observation of student's independent or team work

Subject contents

1. Populations - group features (i.e. size, density, reproduction, mortality, age structure).
2. Biocoenosis - biocoenotic indicators, biodiversity, biotic interactions.
3. Evolutionary ecology.
4. Ecological niche.
5. Ecological tolerance.
6. Curves of areas and observation of the ecological succession phenomenon based on algae communities of the Gulf of Gdańsk.
7. Threats to the aquatic ecosystems - environmental campaigns.

Prerequisites and co-requisites

Basic information in the field of biology and hydrobiology (high school level)

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
active participation in classe	51.0%	15.0%
reports, presentations, projects (assessment based on scientific content, accuracy of the scientific content, originality, form)	51.0%	50.0%
final written test (covering the contents of laboratories)	51.0%	35.0%

Recommended reading

Basic literature	1. Begon M., Townsend C.R., Harper J.L. 2006. Ecology From Individuals to Ecosystems, Blackwell Publishing Ltd. 2. Falińska K. 1996. Ekologia roślin, (Podstawy teoretyczne, populacja, zbiorowisko, procesy), Wyd. PWN, Warszawa 3. Kalinowska A. 2002. O Ekologii - wybór na Nowe Stulecie, Agencja Reklamowo-Wydawnicza A. Grzegorczyk, Warszawa 4. Kawecka B., Eloranta P.N. 1994. Zarys ekologii glonów i środowisk śródlądowych. PWN, Warszawa 5. Kronenberg J., Bergier T. (red.) 2010. Wyzwania zrównoważonego rozwoju w Polsce, Fundacja Sendzimira, ISBN 978-83-62168-00-2 6. Lampert W., Sommer U. 1996. Ekologia wód śródlądowych, Wyd. PWN, Warszawa 7. Trojan P. 1975. Ekologia ogólna, Wyd. PWN, Warszawa
Supplementary literature	-
eResources addresses	

Example issues/ example questions/ tasks being completed

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Work placement

Not applicable

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