University of Gdańsk

Subject card

Subject name and code	Hydroecology - lecture, PG_00201225		
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	2.0
Learning profile	practical	Assessment form	exam
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	dr Aleksandra Zgrundo	

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	1.0	19.0	50

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_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 understand and correctly describe the basic chemical / biological / physical processes and phenomena, analyze them in relation to the aquatic environment Students understand and understands chemical, biological and physical processes and phenomena, identifies them, analyzes their course in relation to the aquatic environment and is aware of the connections between various natural disciplines.	[SW4] test/exam - oral or written

Subject contents

1. Ecology - aim and object of study, basic concepts: habitat, environment, ecological niches, environmental factors and their impact on organisms, the concept of limiting factor with regard to Liebigs law of the minimum and ecological tolerance, ecological spectra, life forms, adaptations.
2. Methodology of basic ecological studies.
3. Structure, dynamics and functioning of populations, biocoenoses and ecosystems. The phenomenon of homeostasis and ecological succession.
4. Introduction to evolutionary ecology.
5. Biodiversity (definitions, threats, legal regulations).
6. Contemporary threats to aquatic ecosystems.
7. Practical application of ecological theories in the formation of artificial systems.

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="3">Basic information in the field of biology and hydrobiology (high school level)</td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Exam</td><td>51.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">1. Kingsolver R.W. 2006. Ecology on campus: lab manual. San Francisco [etc.], Pearson-Benjamin Cummings
2. Smith T.M., Smith R.L. 2014. Elements of Ecology. San Francisco [etc.], Benjamin Cummings</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">1. Krebs Ch.J .2011. Ekologia. Eksperymentalna analiza rozmieszczenia i liczebności. Wydawnictwo Naukowe PWN, Warszawa</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3"></td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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