University of Gdańsk

Subject card

Subject name and code	Hydrobiology - lecture, PG_00199791		
Field of study	Oceanography		
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 scientific research 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	2	ECTS credits	3.0
Learning profile	academic	Assessment form	exam
Conducting unit	Department of Marine Biology and Biotechnology -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Waldemar Surosz, prof. UG	
	Teachers		

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	2.0	43.0	75

Subject objectives

Learning about the specific ecological characteristics of the aquatic environment and the associated biological adaptations of aquatic organisms

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANL3-W01] has an advanced knowledge and understanding of the terminology used in oceanography and related exact and natural sciences (in Polish and a selected foreign language)	to an advanced degree, knows and understands the terminology appropriate in the natural sciences, with particular emphasis on hydrobiological sciences necessary for understanding the basic phenomena and processes occurring in the aquatic environment	[SW4] test/exam - oral or written
[OCEANL3-W02] has a broad knowledge and understanding of physical, biological, chemical, and geological processes and phenomena occurring in aquatic environments, with particular emphasis on the marine environment	knows and understands the basic biological processes occurring in theaquatic environment, identifies and correctly describes basic phenomena hydrobiological and natural processes occurring in the marine environment	[SW4] test/exam - oral or written

Subject contents

A.1. Specificity of conditions of life in water (physical, chemical, edaphic, biological parameters).
A.2. Biology of aquatic organisms (buoyancy, osmoregulation and ionoregulation, respiration, nutrition, reproduction).
A.3. Overview and characteristics of ecological formations: plankton, nekton, pleuston, neuston, benthos.
A.4. Ecobiological characteristics of the aquatic environment in terms of basic types of reservoirs.
A.5. Formation of ecological parameters in the littoral, sublittoral, benthal and pelagial.
A.6. Basic data on the productivity of aquatic ecosystems.
A.7. Problems of modern hydrobiology: eutrophication, acidification and saprobation.

Prerequisites and co-requisites

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><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>Pliński M., 1992, General Hydrobiology, ed. University of Gdansk, (and later editions)
Odum E., 1982, Fundamentals of ecology, PWRiL, Warsaw, Poland.
Żmudziński L., 1974, The animal world of the Baltic Sea, WSIP Wydawnictwa Szkolne i Pedagogiczne
Starmach K., Wróbel., Pasternak K., 1976, Hydrobiology, Limnology, PWN, Warsaw
Thurman U., 1982, Outline of oceanology, Wydawnictwo Morskie, Gdansk, Poland.</td></tr>
<tr><td>Supplementary literature</td><td>Chojnacki J., 1998, Basics of water ecology, Wyd. Akademii Rolniczej w Szczecinie, Szczecin
Kajak Z., 1998, Hydrobiology - Limnology, Wyd. Nauk. PWN, Warsaw
Mikulski J., 1982, Biology of inland waters, PWN, Warsaw
Opuszyński K., 1979, Basics of fish biology, Edition: PWRiL
Pliński M., 2008, Biology of marine organisms, University of Gdańsk, Gdańsk
Podbielkowski Z., Tomaszewicz H., 1979, Outline of hydrobotany, PWN, Warszawa
Polakowska M., 1961, Water plants Atlas, Państwowe Zakłady Wydawnictw Szkolnych
Starmach K., 1973, Inland waters. Outline of hydrobiology, UJ script, Cracow
Telesh I., Postel L., Heerkloss R., Mironova K., Skarlato, S. (2008). Zooplankton of the Open Baltic Sea: Atlasdansk.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2"></td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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