

**Subject card**

<b>Subject name and code</b>	Hydrobiology - lecture, PG_00199791						
<b>Field of study</b>	Oceanography						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2026/2027		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	1	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	2	<b>ECTS credits</b>			3.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			exam		
<b>Conducting unit</b>	Department of Marine Biology and Biotechnology -> Faculty of Oceanography and Geography -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr hab. Waldemar Surosz				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	<b>Participation in didactic classes included in study plan</b>		<b>Participation in consultation hours</b>		<b>Self-study</b>	<b>SUM</b>
	<b>Number of study hours</b>	30		2.0		43.0	75
<b>Subject objectives</b>	Learning about the specific ecological characteristics of the aquatic environment and the associated biological adaptations of aquatic organisms						
<b>Learning outcomes</b>	<b>Course outcome</b>		<b>Subject outcome</b>			<b>Method of verification</b>	
	[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 the aquatic environment, identifies and correctly describes basic phenomena hydrobiological and natural processes occurring in the marine environment			[SW4] test/exam - oral or written	
	[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	
<b>Subject contents</b>	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, benthic and pelagic. A.6. Basic data on the productivity of aquatic ecosystems. A.7. Problems of modern hydrobiology: eutrophication, acidification and saprobation.						
<b>Prerequisites and co-requisites</b>							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		exam	51.0%
Recommended reading	Basic literature	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.	
	Supplementary literature	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.	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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