University of Gdańsk

Subject card

Subject name and code	Hydrobiology - laboratory, PG_00199790						
Field of study	Oceanography						
Date of commencement of studies	October 2027		Academic year of realisation of subject	2027/2028			
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	4.0			
Learning profile	academic		Assessment form	credit			
Conducting unit	Department of Marine Biology and Biotechnology -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Justyna Kobos				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	45.0	0.0	0.0	45
	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	45		5.0	50.0	100	
Subject objectives	To learn about the ecological characteristics of the aquatic environment, the functioning of inland and marine ecosystems, and how various organisms adapt to life in the aquatic environment.						

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)	knows and understands the terminology used in hydrobiology at an advanced level	[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 a wide range of chemical, physical, biological and geological processes and phenomena affecting aquatic organisms	[SW4] test/exam - oral or written
[OCEANL3-U03] is able to process, describe, and present results, and draw conclusions	is able to develop, describe and present results based on hydrobiological research	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
[OCEANL3-K05] is willing to take responsibility for the safety of his/ her own and others' work, is aware of the risks and threats resulting from the work performed	is aware of the risks and dangers arising from the work of a hydrobiologist	[SK2] presentation/project/paper/ report
[OCEANL3-U03] is able to analytically and synthetically compile research and analysis results and, based on them, draw correct conclusions	is able to analytically and synthetically develop the results of hydrobiological research and draw correct conclusions based on them	[SU2] presentation/project/paper/ report

Subject contents

Topics of exercises:

1. to learn about the properties of the aquatic environment, i.e. the physico-chemical, edaphic and biotic parameters of fresh and marine waters, which have a major impact on the occurrence and biology of the organisms living there.

2. to introduce different types of water - river, lake and sea.

3. to learn about plant and animal organisms living in different aquatic ecosystems - saline, brackish and fresh.

4. to learn about the interrelationships and interconnections of these organisms with the environment, using selected examples.

5. to discuss the problems of modern hydrobiology - including drought, eutrophication, acydification.

6. Interpretation of data presented in environmental reports

7. Learning the methods of collecting, preserving and storing selected samples during field work by hydrobiologists

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
worksheet	51.0%	20.0%
tests	51.0%	60.0%
presentatons	51.0%	20.0%

Recommended reading

Basic literature

Plińsk M., 1992, Hydrobiologia ogólna, wyd. Uniwersytet Gdański (i wydania późniejsze) (in Polish)

Górniak A., Kajak Z., 2019, Hydrobiologia - Limnologia, wyd. PWN (in Polish)

Odum E., 1982, Podstawy ekologii, PWRiL, Warszawa (in Polish)

	Supplementary literature	Żmudziński L., 1974, Świat zwierząt Bałtyku, WSiP (in Polish) Thurman U., 1982, Zarys oceanologii, Wydawnictwo Morskie, Gdańsk (in Polish) Chojnacki J., 1998, Podstawy ekologii wód, wyd. Akademii Rolniczej w Szczecinie, Szczecin (in Polish) Kajak Z., 1998, Hydrobiologia - Limnologia Wyd. Nauk. PWN, Warszawa (in Polish) Opuszyński K., 1979, Podstawy biologii ryb, Wyd. PWRiL (in Polish) Pliński M., 2008, Biologia organizmów morskich, Wyd. Uniwersytet Gdański, Gdańsk (in Polish) Podbielkowski Z., Tomaszewicz H., 1979, Zarys hydrobotaniki, PWN Warszawa (in Polish) Polakowska M., 1961, Rośliny wodne - Atlas, Państwowe Zakłady Wydawnictw Szkolnych (in Polish) Starmach K., 1973, Wody śródlądowe. Zarys hydrobiologii. Skrypt UJ Kraków (in Polish)
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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