University of Gdańsk

Subject card

Subject name and code	Hydrology and Oceanography - laboratory, PG_00193824		
Field of study	Geography		
Date of commencement of studies	October 2026	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	2	Language of instruction	Polish
Semester of study	3	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Limnology -> Department of Hydrology -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Izabela Chlost	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	30.0	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	18.0	50

Subject objectives

1. Learning the sources of hydrological information.

2. Identifying types and characteristics of hydrographic objects, taking into account their role in the water cycle.

3. Mastering the ability to prepare the results of hydrometric measurements.

4 .Acquiring basic skills in interpreting hydrological data.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOGRL3-U05] can use scientific language and express opinions and discuss topics related to geography in Polish and a foreign language	Knows and uses concepts related to hydrology and the water cycle.	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work [SU4] test/exam - oral or written
[GEOGRL3-U04] can apply field and laboratory methods and research tools, spatial analysis methods, and methods of presenting research results in the field of geography, assess their usefulness for tasks in which the application goal of geography can be realized	Knows the sources and methods of obtaining and processing hydrological data and has the skills to visualize them graphically.	[SU3] text preparation/written work
[GEOGRL3-W04] has advanced knowledge of the Earth's geographical environment, understood as a unified system of interconnected and interacting components; its diversity, functioning, and dynamics of change, including the interaction of environmental components in the area of the South Baltic Coast and Lake District	Understands the cause-and-effect aspects of the water cycle, and is able to use them in the interpretation of hydrological data.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW3] text preparation/written work

Subject contents

B. Problems of exercises:

B.1 Hydrographic units and the ability to isolate them

B.2 Elements of the hydrographic characteristics of the catchment (morphometric and physico-geographic parameters of the catchment, parameters of the water network, structure hydrographic catchment area).

B.3 Characteristics of river runoff (variability of water levels and flows, runoff measures, size and structure of runoff, river water systems).

B.4 Water balance of the controlled catchment.

B.5 Selected elements of limnological characteristics (morphometry of lake basins, thermals of lake water).

B.6 Groundwater and its characteristics.

B.7 Hydrographic map of Poland at a scale of 1:50,000 as a source of information about water (map content, map interpretation, ways of presenting phenomena and natural and anthropogenic threats related to water).

B.8 Oceanography with particular emphasis on the Baltic Sea - features of ocean waters (physical and chemical properties of sea waters, division of ocean waters); The Baltic Sea compared to other European seas

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
active participation in classes	51.0%	20.0%
final test	51.0%	40.0%
partial exercises	51.0%	40.0%

Recommended reading	Basic literature	A. Literature required to finally pass the course (pass the exam): A.1. used during classes: Bajkiewicz-Grabowska E., Magnuszewski Z., 2009,guide to exercises in general hydrology, Ed. Science. .PWN, Warsaw A.2. studied independently by the student: Dynowska I., Tlałka A., 1982, Hydrografia, PWN, Warszawa-Poznań Dynowska I., 1971 Types of river regimes in Poland, Works of IG UJ, Kraków Lange W. (ed.), 1993, Methods of physical-limnological research, UG script, Gdańsk
	Supplementary literature	B. Additional literature: Technical guidelines K 3-4. Hydrographic map of Poland on a scale of 1:50,000, 1985, Warsaw.
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. Using a topographic map at a scale of 1:10,000, draw the watershed of the lake district, mark the areas and depressions without drainage. Create a legend. 2. Based on data on average monthly and daily water levels in a mountain and lowland river, graphically represent the variability of these levels and indicate the differences and causes of variability in both rivers. 3. Present and interpret the water balance of the catchment area of a selected river or lake.	
Work placement	Not applicable	

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