University of Gdańsk

Subject card

Subject name and code	Hydrology and Oceanography - lecture, PG_00193823		
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	exam
Conducting unit	Laboratory of Limnology -> Department of Hydrology -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. Roman Cieśliński	
	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	1.0	19.0	50

Subject objectives

1. Learning the causes and geographical conditions of water circulation in nature.

2. Spatial diversity of hydrosphere objects and their characteristics.

3. Learning the sources of hydrological information.

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

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	The student is able to use scientific language and express opinions and discuss topics related to geography in Polish and a foreign language.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
[GEOGRL3-U02] can use theoretical knowledge in the field of geography and available sources of information to correctly interpret basic natural, social, economic, and political processes and phenomena	The student is able to use theoretical knowledge in the field of geography and available sources of information to correctly interpret basic natural, social, economic, and political processes and phenomena.	[SU4] test/exam - oral or written
[GEOGRL3-W02] knows and understands key concepts and theories in geography, as well as advanced processes and phenomena related to spatial diversity and the distribution of processes and phenomena on the Earth's surface at various spatial scales, particularly in Poland	The student knows key concepts and theories in geography and, at an advanced level, processes and phenomena related to spatial diversity and the distribution of processes and phenomena on the Earth's surface at various spatial scales, in particular in Poland.	[SW4] test/exam - oral or written
[GEOGRL3-U01] can dentify and analyze basic natural and socio-economic processes and phenomena, analyze their causes and course, and formulate and discuss basic issues concerning physical-geographical conditions and the social, economic, and political situation and their changes on various spatial scales	The student is able to identify and analyze basic natural and socio-economic processes and phenomena, analyze their causes and course, and formulate and discuss basic issues concerning physical-geographical conditions and the social, economic, and political situation and their changes on various spatial scales.	[SU4] test/exam - oral or written
[GEOGRL3-K02] is prepared to bear full responsibility for the actions taken actions and adhere to the principles of professional ethics and principles of intellectual honesty, is aware of the importance of a professional approach in professional life professional life	The student is aware of their full responsibility for their actions and of the need to comply with the principles of professional ethics and intellectual integrity. They understand the importance of a professional approach in their working life.	[SK8] observation of student's independent or team 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	The student 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.	[SW4] test/exam - oral or written

Subject contents	A. Topics of the lecture: A.1. Subject and scope of hydrology research. A.2. Hydrosphere and its properties. A.3. An underground link in the water cycle. A.4. Hydrographic objects (springs, streams, lakes, swamps, glaciers). A.5. Territorial hydrographic units. A.6. The terrestrial part of the hydrological cycle. A.7. Water balance and its changes. A.8. Thermal and dynamic processes in inland waters. A.9. River debris. A.10. Selected issues in oceanography.
Prerequisites and co-requisites	
Assessment methods and criteria	

Subject passing criteria	Passing threshold	Percentage of the final grade
exam	51.0%	100.0%

Recommended reading	Basic literature	A. Literature required to finally pass the course (pass the exam): A.1. used during classes: Bajkiewicz-Grabowska E., 2011, General hydrology, Ed. Science. PWN, Warsaw. Kosowska-Cezak U., Bajkiewicz-Grabowska E., 2009, Basics of hydrometeorology. Ed. Nauk PWN, Warsaw. Choiński A., 2000, Lakes of the globe, PWN, Warsaw A.2. studied independently by the student Duxbury A. C., Duxbury A. B., Sverdrup K. A., 2002, Oceans of the world, PWN, Warsaw. Łomniewski K., 1969, Physical oceanography, PWN, Warsaw. Łomniewski K., Mankowski W., Zaleski J., 1975, Baltic Sea, PWN, Warsaw. Pazdro Z., 1983, General hydrogeology, Ed. Geol., Warsaw. 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	.Choiński A., Kaniecki A., 1996, Waters of the Earth, Great Encyclopedia of World Geography, vol. IV, ed. Kurpisz, Poznań. Czaya, 1987, Rivers of the Earth, PWN, Warsaw. Majewski A., 1992, Oceans and Seas, PWN, Warsaw.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Determination of watersheds in mountainous and young-glacial areas. Characteristic states. Calculation of flow in a selected profile. Relationships between water levels and flows. Determination of values of basic morphometric parameters of the lake. Water balance of a selected catchment.	
Work placement	Not applicable	

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