

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	<p>1. Learning the causes and geographical conditions of water circulation in nature.</p> <p>2. Spatial diversity of hydrosphere objects and their characteristics.</p> <p>3. Learning the sources of hydrological information.</p> <p>4. Mastering the ability to prepare the results of hydrometric measurements.</p>						

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 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	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	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	<p>A. Topics of the lecture:</p> <p>A.1. Subject and scope of hydrology research.</p> <p>A.2. Hydrosphere and its properties.</p> <p>A.3. An underground link in the water cycle.</p> <p>A.4. Hydrographic objects (springs, streams, lakes, swamps, glaciers).</p> <p>A.5. Territorial hydrographic units.</p> <p>A.6. The terrestrial part of the hydrological cycle.</p> <p>A.7. Water balance and its changes.</p> <p>A.8. Thermal and dynamic processes in inland waters.</p> <p>A.9. River debris.</p> <p>A.10. Selected issues in oceanography.</p>								
Prerequisites and co-requisites									
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="454 1025 798 1059">Subject passing criteria</th> <th data-bbox="802 1025 1141 1059">Passing threshold</th> <th data-bbox="1145 1025 1489 1059">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="454 1066 798 1095">exam</td> <td data-bbox="802 1066 1141 1095">51.0%</td> <td data-bbox="1145 1066 1489 1095">100.0%</td> </tr> </tbody> </table>	Subject passing criteria	Passing threshold	Percentage of the final grade	exam	51.0%	100.0%		
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exam	51.0%	100.0%							

Recommended reading	Basic literature	<p>A. Literature required to finally pass the course (pass the exam):</p> <p>A.1. used during classes:</p> <p>Bajkiewicz-Grabowska E., 2011, General hydrology, Ed. Science. PWN, Warsaw.</p> <p>Kosowska-Cezak U., Bajkiewicz-Grabowska E., 2009, Basics of hydrometeorology. Ed. Nauk PWN, Warsaw.</p> <p>Choiński A., 2000, Lakes of the globe, PWN, Warsaw</p> <p>A.2. studied independently by the student</p> <p>Duxbury A. C., Duxbury A. B., Sverdrup K. A., 2002, Oceans of the world, PWN, Warsaw.</p> <p>Łomniewski K., 1969, Physical oceanography, PWN, Warsaw.</p> <p>Łomniewski K., Mankowski W., Zaleski J., 1975, Baltic Sea, PWN, Warsaw.</p> <p>Pazdro Z., 1983, General hydrogeology, Ed. Geol., Warsaw.</p> <p>Dynowska I., Tlałka A., 1982, Hydrografia, PWN, Warszawa-Poznań.</p> <p>Dynowska I., 1971 Types of river regimes in Poland, Works of IG UJ, Kraków.</p> <p>Lange W. (ed.), 1993, Methods of physical-limnological research, UG script, Gdańsk.</p>
	Supplementary literature	<p>.Choiński A., Kaniecki A., 1996, Waters of the Earth, Great Encyclopedia of World Geography, vol. IV, ed. Kurpisz, Poznań.</p> <p>Czaya, 1987, Rivers of the Earth, PWN, Warsaw.</p> <p>Majewski A., 1992, Oceans and Seas, PWN, Warsaw.</p>
	eResources addresses	
Example issues/ example questions/ tasks being completed	<p>Determination of watersheds in mountainous and young-glacial areas.</p> <p>Characteristic states.</p> <p>Calculation of flow in a selected profile.</p> <p>Relationships between water levels and flows.</p> <p>Determination of values of basic morphometric parameters of the lake.</p> <p>Water balance of a selected catchment.</p>	
Work placement	Not applicable	

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