University of Gdańsk

Subject card

Subject name and code	Hydrographic Research Method - laboratory classes, PG_00201443		
Field of study	Water Management and Protection of Water Resources		
Date of commencement of studies	October 2027	Academic year of realisation of subject	2028/2029
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Subject group related to practical vocational preparation
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	4	ECTS credits	2.0
Learning profile	practical	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 Kamil Nowiński	
	Teachers		

Lesson types

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

Learning practical methods of measuring hydrographic objects and interpreting measurement results.Characterization of various typologies and classifications of hydrographic objects.Identifying the relationship between hydrographic objects and their environment.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GWOZWL3-W04] research techniques, methods and tools currently used in water management and the protection of water resources, in both the natural and social sciences, including basic statistical and IT tools enabling the description, modelling and interpretation of data concerning phenomena and processes occurring in the aquatic environment, as well as tools for describing relationships within socio-ecological systems.	The student knows basic research techniques and methods to describe, interpret and explain the relationships between the various natural phenomena that determine the functioning of hydrographic objects	[SW4] test/exam - oral or written [SW5] implementation of a problem task
[GWOZWL3-U07] use literature and other available sources of information, including information technology, multimedia, Internet, databases, and select and critically evaluate information.	Can select appropriate source materials, skillfully gathers knowledge in water science from a variety of sources, demonstrates the ability to select, evaluate and make correct inferences based on data from a variety of sources	[SU5] implementation of a problem task
[GWOZWL3-K05] take responsibility for the safety of his own work and that of others, dealing with emergencies, exercising caution in the laboratory and in the field, responsibility for entrusted equipment and apparatus.	The student is ready to work and cooperate in a group, being aware of the responsibility for his actions and taking into account the common good. He observes the rules of safety and is ready to take responsibility for his own safety and the safety of others both while performing chamber work	[SK5] implementation of a problem task
[GWOZWL3-U16] demonstrate creativity in working independently and in team, taking on a variety of roles, including a leadership role.	He is able to plan and organize the correct execution of individual and group work. Using original methods, he is able to solve problems that arise during the implementation of tasks. When carrying out group work, he assumes different roles in the group. By questioning and discussing, he fills in the gaps in knowledge and clarifies the problems of interpretation of natural phenomena	[SU5] implementation of a problem task
[GWOZWL3-U02] select and independently apply basic research techniques and tools, with adhering to established analytical procedures in the field of environmental research in water management, adequately to the considered research problem.	He can select appropriate research techniques and tools to solve tasks and problems arising from the variability of natural phenomena. Using his/her knowledge, he/she is able to identify regularities and draw conclusions in the field of causes and effects of phenomena occurring in the water environment and mutual relations between the hydrographic object and its environment	[SU4] test/exam - oral or written [SU5] implementation of a problem task

Subject contents

1. Interpretation of cartographic materials (geomorphological, hydrogeological and topographic maps) as a basis for determining the genesis of hydrographic objects and water cycle conditions.2. Methods of measurement and analysis of morphometric parameters of selected water objects using GIS tools..3. Characterization of physical and chemical parameters of waters as a tool for determining the characteristics of hydrographic objects and their natural and anthropogenic transformations.4. Threats and protection of hydrographic objects analysis of land use structure.5. Detailed Hydrographic Map of Poland at a scale of 1:50,000 as a source of hydrographic information.6. Measurement methodology of elements of the hydrological cycle.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test	51.0%	50.0%
problem tasks	51.0%	50.0%

Recommended reading

Basic literature	Bajkiewicz-Grabowska E., Magnuszewski A., Mikulski Z., 1993, Hydrometry, Wyd. Nauk NWN, Warsaw, 314 p.Pasławski Z., 1973, Methods of river hydrometry, PIHM Instructions and Manuals No. 115, Wyd. Komunikacji i Łączności, Warsaw.Lange W. (ed.), 1993, Methods of limnological research, UG, Gdańsk,GIS-3 Technical Guidelines, Hydrographic Map of Poland - scale 1:50,000, 2005, GUGiK, Warsaw.

	Supplementary literature	Dębski K., 1965, Hydrology: Hydrometry, Part 1, Publishing Department of SGGW, Warsaw, 223 p. Byczkowski A., 1999, Hydrology, Volume 1, SGGW Publishing Department, Warsaw, 416 p.Choiński A., 2007, Physical Limnology of Poland, Wyd. UAM, Poznań, 547 p.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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