

Subject card

Subject name and code	Hydrology - field exercises, PG_00092779						
Field of study	Marine Hydrography						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2024/2025		
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	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			1.0		
Learning profile	practical	Assessment form			credit		
Conducting unit	Pracownia Hydrologii -> Department of Hydrology -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor	dr Wojciech Maślanka					
	Teachers	dr Wojciech Maślanka mgr Marlena Pawłowska					
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	20.0	0.0	0.0	0.0	20
	E-learning hours included: 0.0						
	Additional information: field exercises, measurements						
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	20	2.0	8.0	30		
Subject objectives	<p>1. Identifying cause-and-effect relation and the way water circulates in nature.</p> <p>2. The spatial differentiation and the ability to identify hydrographic objects and hydrotechnical devices in the field - field mapping.</p> <p>3. The use of equipment and the correct implementation of basic hydrological measurements, the development and interpretation of measurement results.</p> <p>4. To learn about the impact of natural and anthropogenic factors on the formation of the hydrosphere.</p>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[HML3-K01] correctly identify and resolve professional dilemmas, especially in the aspects of security and entrusted property	able to critically evaluate the knowledge he knows and the content he receives, respects the importance of knowledge in solving cognitive and practical problems, consults experts in case of difficulties in solving the problem independently;	[SK8] observation of student's independent or team work
	[HML3-U03] recognise natural (including geological) and anthropogenic objects and link them to the processes leading to their formation	independently, on the basis of his knowledge, identify hydrographic and anthropogenic objects and can identify the processes contributing to their formation;	[SU6] demonstration of practical skills
	[HML3-W02] selected phenomena and processes occurring in the hydrosphere, atmosphere, lithosphere and biosphere, their interconnections and relations, as well as practical applications of this knowledge in professional activities related to the field of study	knows and understands the processes, occurrences and their interconnections in the hydrosphere, atmosphere, lithosphere and biosphere; knows the practical application of this knowledge;	[SW2] presentation/project/paper/report
	[HML3-W04] the issue of measurements related to the exploration of sea basins and inland waters and tools allowing to describe, interpret and present the results of measurements	knows and understands the issues involved in the study of the inland waters; knows the tools to describe, interpret and present the results of measurements obtained in the field;	[SW3] text preparation/written work
	[HML3-U18] work individually and in team, manage the work of the team, in particular comply with health and safety regulations and ergonomics	able to work individually and as part of a team, organizes and directs work in a team in conformity with BHP and ergonomic principles;	[SU8] observation of student's independent or team work
	[HML3-U02] select and apply basic research techniques and tools in the field of aquatic environment research, as well as plan and carry out measurements, develop the obtained results and interpret them correctly	applies appropriate methods, techniques and research tools for the study of the hydrosphere; plans and carries out measurements, correctly analyzes and interprets the achieved results;	[SU5] implementation of a problem task
[HML3-U14] use the applicable terminology in presenting and discussing problems related to the field of study	uses current terminology when presenting and developing results and discussing problems in hydrology;	[SU1] oral statement/conversation/discussion	
Subject contents	<ol style="list-style-type: none"> 1. Hydrographic mapping (identification of hydrographic objects). 2. Measure the flow rate by various methods. 3. Measuring the discharge of groundwater outflows. 4. Measurements of water conditions in wetlands. 5. Methods of limnological research. Stratification of lakes. 6. Measurements of basic physical and chemical characteristics of surface and groundwater. 		
Prerequisites and co-requisites	Background knowledge of physical geography at the high school level.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	field exercises: project/report	60.0%	50.0%
	completion of the credit work	60.0%	50.0%

Recommended reading	Basic literature	<p>Bajkiewicz-Grabowska E., 2021, Hydrologia ogólna, PWN, Warszawa.</p> <p>Bajkiewicz-Grabowska E., Magnuszewski Z., 2009, Przewodnik do ćwiczeń z hydrologii ogólnej, PWN, Warszawa.</p> <p>Gutry-Korycka M., Werner-Więckowska H., 1989, Przewodnik do hydrograficznych badań terenowych, PWN, Warszawa.</p> <p>Kosowska-Cezak U., Bajkiewicz-Grabowska E., 2009, Podstawy hydrometeorologii. PWN, Warszawa.</p> <p>Pociask-Karteczka J. (red), 2003, Zlewnia. Właściwości i procesy, UJ IGiGP, Kraków.</p> <p>Tarka R., 1999, hydrologia - Przewodnik do ćwiczeń laboratoryjnych i terenowych, Uniwersytet Wrocławski, Wrocław.GIS-3,</p> <p>Mapa Hydrograficzna Polski w skali 1:50 000, Wytyczne techniczne, 2005, GUGiK, Warszawa.</p> <p>Drwal J., Gołębiowski R., Lange W., 1975, Dorzecze Borucinki jako przykład zlewni reprezentatywnej Pojezierza Kaszubskiego, Zesz. Nauk. Wydz. BiNOZ UG, Geografia 3.</p> <p>Borowiak D. (red.), 2007, Jeziora Kaszubskiego Parku Krajobrazowego, Ser. Bad. Limn. 5, Wydaw. KLUG, Gdańsk.</p> <p>Lange W. (red.), 2005, Jeziora górnej Raduni i jej zlewnia w badaniach z udziałem Stacji Limnologicznej w Borucinie, Ser. Bad. Limnol. 3, Wydaw. KLUG</p>
	Supplementary literature	<p>Byczkowski A., 1999, Hydrologia, t. I i II, Wydaw. SGGW, Warszawa.</p> <p>Dynowska I., 1971 Typy reżimów rzecznych w Polsce, Prace IG UJ, Kraków</p> <p>Lange W. (red.), 1993, Metody badań fizycznolimnologicznych, Wyd. UG, Gdańsk.</p> <p>Pociask - Karteczka J., (red.), 2003, Zlewnia, właściwości i procesy, UJ IGiGP, Kraków.</p> <p>Mapa Hydrograficzna Polski skala 1:50 000 w formie analogowej i numerycznej.</p>
	eResources addresses	
Example issues/ example questions/ tasks being completed	<p>Measurements of flow rates by various methods in selected watercourses - development and interpretation of results.</p> <p>Measurements on a lake - development and interpretation of results.</p> <p>Field mapping - development and interpretation of results.</p>	
Work placement	Not applicable	

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