



Subject card

Subject name and code	Water Management, PG_00042696						
Field of study	Environmental Engineering						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2023/2024		
Education level	first-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Part-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	6	ECTS credits			2.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Hydraulic Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Tomasz Kolerski				
	Teachers		dr hab. inż. Tomasz Kolerski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	5.0	0.0	20
	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	20		4.0		36.0	60
Subject objectives	Principles and practice of water resources planning and management						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_U01] has the ability to self-education, can obtain information from literature, databases and other sources, uses information technology, Internet resources; can integrate the obtained information, make their interpretation, as well as draw conclusions and formulate and justify opinions	The student is able to analyze the data	
	[K6_W05] knows the theoretical basis of hydromechanics and its practical models, necessary to solve technical problems in the field of environmental engineering (sanitary engineering, water melioration, water management and flood protection, pollution spread)	The student is able to calculate the amount of surface runoff, calculate the usable and flood capacity of retention reservoirs	
	[K6_U03] can prepare documentation regarding the implementation of an engineering task/project and prepare a text or presentation including a discussion of the results of the implementation	The student knows how to prepare technical documentation	
	[K6_W01] has knowledge in the field of mathematics, including: linear algebra, mathematical analysis and elements of mathematical statistics, probability theory, applications of mathematics, including mathematical methods and numerical methods, necessary for: 1) description and analysis of hydrological phenomena; 2) description and analysis of meteorological phenomena; 3) solving project tasks of the sanitary industry;	106 / 5000 Translation results The student knows the mathematical and numerical methods necessary for the description and analysis of hydrological phenomena;	
[K6_W04] possesses elementary knowledge in the field of land mechanics, ground science, land reclamation and geotechnics; has basic knowledge about the composition of air, water and soil, environmental pollution and processes responsible for their formation and ways to reduce them, knows the principles and organization of sustainable water management	The student knows the principles and organization of sustainable water resources management		
Subject contents	This course is designed to acquaint students with the history and practice of water resources planning and management.		
Prerequisites and co-requisites	This course is designed to acquaint students having certain background in Hydrology		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Report	60.0%	50.0%
	Test	60.0%	50.0%
Recommended reading	Basic literature	<p>Kolerski T. (2014), <i>Praktyczne aspekty gospodarki wodnej w projektowaniu zbiorników retencyjnych</i>, wyd. PG</p> <p>Lambor L. (1962), <i>Gospodarka wodna na zbiornikach retencyjnych</i> Arkady</p> <p>Ciepielowski A. (1999) <i>Podstawy gospodarowania wodą SGGW</i></p> <p>Mikulski Z. (1998) <i>Gospodarka wodna</i> PWN</p>	

	Supplementary literature	Szpindor, A. Piotrowski J. (1986) <i>Gospodarka wodna</i> PWN 1986 Dziewoński Z. (1973) <i>Rolnicze zbiorniki retencyjne</i> Warszawa <i>Gospodarka wodna</i> - miesięcznik
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	calculations of the conservation zone Calculation of the flood zone GUH calculation	
Work placement	Not applicable	