GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	WATER RESOURCES MANAGEMENT, PG_00060007		
Field of study	Environmental Engineering		
Date of commencement of studies	February 2026	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	English
Semester of study	2	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Tomasz Kolerski	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	15.0	0.0	15.0	0.0	60

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	60	5.0	38.0	103

Subject objectives

Advances and practice of water resources management

Learning outcomes

Course outcome	Subject outcome	Method of verification
K7_U10	The student is able to design the permanent retention capacity of a retention tank	[SU3] Assessment of ability to use knowledge gained from the subject
[K7_U01] can obtain information from literature, databases and other sources; can integrate the obtained information, interpret and critically evaluate them, draw conclusions, and formulate and comprehesively justify the opinions	The student is able to use raw data and process this data to obtain the necessary input information to solve the task. The student is able to use the IMGW databases	[SU2] Assessment of ability to analyse information
K7_W09	The student has knowledge about hydrological processes occurring in a natural catchment	[SW1] Assessment of factual knowledge
K7_U03	The student is able to prepare a report on the completion of the task	[SU5] Assessment of ability to present the results of task
K7_U06	The student is able to calculate the flow routing using the linear reservoir model	[SU3] Assessment of ability to use knowledge gained from the subject

Subject contents

Course content – lecture
A study of the advances engineering involved in analyzing and managing the quantity of water in natural and developed systems. The course illustrate the roles of interdisciplinary teamwork, partnerships, and public involvement in planning and management processes and present the elements of integrated water resources planning and management

Prerequisites and co-requisites

This course is designed to students with the basic knowledge of principles of water resources planning and management

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
homework	60.0%	50.0%
test	60.0%	50.0%

Recommended reading	Basic literature	1. Cech, T., V., *Principles of Water Resources,* John Wiley & Sons, Inc. 2002 2. Dzurik, A., A., *Water Resources Planning* (3rd ed), Rowman & Littlefield Pub. Inc., 2003. 3. Mays L. W., Water Resources Engineering, 2005 Edition John Wiley & Sons, Inc.
	Supplementary literature	1. Chow, V.T., *Open-channel Hydraulics*, McGraw-Hill, 1959 2. Henderson, F., M., *Open Channel Flow*, Prentice Hall, 1966 3. Shen H. T., *Mathematical Modeling of River Ice Processes,* Cold Regions Science and Technology, Volume 62, Issue 1, June 2010, Pages 3-13 4. Young D. F., Munson B R Okiishi T. H., Huebsch W. W., A Brief Introduction to Fluid Mechanics, John Willey and Sons, Inc. 2007 (or later edition)
	eResources addresses	
Example issues/ example questions/ tasks being completed	Rainfall exces and surface outflow from the basin Thermal budget of the snow surface Flow routing	
Practical activites within the subject	Not applicable	

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