GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	DEWATERING IN CIVIL ENGEENERING, PG_00044239		
Field of study	Civil Engineering		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	Optional subject group
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	4	Language of instruction	Polish
Semester of study	7	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Geotechnics, Geology and Marine Civil Engineering -> Faculty of Civil and Environmental Engineering		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Adam Szymkiewicz	
	Teachers	prof. dr hab. inż. Adam Szymkiewicz dr inż. Marzena Wójcik	

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	15.0	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	5.0	15.0	50

Subject objectives

To familiarize students with basic principles of design and operation of dewatering systems, with focus on construction dewatering.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U17] has specialized skills in civil engineering within offered specialization	Students gain skills in designing dewatering systems	[SU4] Assessment of ability to use methods and tools
[K6_W16] Has deeper and adequate knowlege of civil engineering, within offered specialization	Students have knowledge on design and operation of dewatering systems	[SW3] Assessment of knowledge contained in written work and projects
[K6_W15] Has knowlege of construction law and environmetal impact of investment realisation	Students gain knowledge about the impact of dewatering systems on the surroundings and methods to minimize this impact	[SW1] Assessment of factual knowledge

Subject contents

Groundwater occurence and its impact on structures. Horizontal drainage systems. Dewatering of excavations. Impact of dewatering on surroundings.

Prerequisites and co-requisites

Knowledge of soil mechanics and foundation egineering

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
completing project exercises	50.0%	100.0%

Recommended reading

Basic literature	E. *Mielcarzewicz* (1990), Odwadnianie terenów zurbanizowanych i przemysłowych J. Sokołowski, A. Żbikowski (1993), Odwodnienia budowlane i osiedlowe
Supplementary literature	Cashman, P. M., & Preene, M. (2020). *Groundwater lowering in construction: a practical guide to dewatering*. CRC Press.
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	Calculating groundwater discharge to excavation. Placing groundwater wells around excavation. Calculating groundwater discharge to horizontal drains.
Work placement	Not applicable