



## Subject card

Subject name and code	Diploma/Final Dissertation, PG_00042536						
Field of study	Environmental Engineering						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2023/2024		
Education level	second-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	2	Language of instruction			Polish		
Semester of study	4	ECTS credits			20.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Sanitary Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor						
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	0.0	0
	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	0		40.0		360.0	400
Subject objectives	Based on the knowledge of studies and work during the diploma semester, the student solves the problem formulated in the subject of the engineering diploma thesis. The student presents the prepared diploma thesis.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_W10] has knowledge of the protection and management of intellectual, industrial and copyright resources	can find and properly use sources of information relating to the problem area of the diploma thesis					
	[K7_U03] can elaborate detailed documentation presenting results of an experiment, design or research task; can prepare a paper to discuss the results	can manage their own time, make commitments and meet the schedule					
	[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 comprehensively justify the opinions	can find and properly use sources of information relating to the problem area of the diploma thesis					
	[K7_U11] can formulate reports preparing for the research work; can identify the direction of further education and complete the process of self-education"	the effects of the student's knowledge are related to the topic of the diploma dissertation; during the thesis process, the knowledge acquired by the student during the studies is confirmed, as well as its consolidation and development					
	[K7_U82] is able to proficiently obtain and process information related to field of study and academic environment in foreign language at B2+ level of the Common European Framework of Reference for Languages (CEFR)						

Subject contents	<p>Legal requirements for obtaining a university diploma, organization of own research, requirements for diploma theses, their defense and diploma examinations. Writing diploma theses: preparation of diploma theses, publication components, preparation of the status of an issue in specialist literature related to the subject of the work, writing technique, editorial preparation of publications. Preparation of multimedia presentations.</p>		
Prerequisites and co-requisites	<p>The student should have a basic knowledge of the principles of designing water and sewage and gas installations, installation materials available on the market and legal regulations in this field.</p>		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Review of the thesis	60.0%	100.0%
Recommended reading	Basic literature	<p>1. PN-92 / B-01706 Water supply installations. Design requirements 2. PN-88 / M-54907 Screw water meters with vertical axis of the meter 3. Regulation of the Minister of Infrastructure of November 6, 2008. on technical conditions to be met by buildings and their location 4. PN-EN 33-2011 Toilet bowls and toilet sets 5. PN-EN 31-2011 Washbasins connecting dimensions 6. PN-EN 695: 2005 Kitchen sinks - connection dimensioning 7. PN-EN 232: 2005 Bath tubs connecting dimensions 8. Technical requirements of Cobrti Instal. Technical conditions for the construction and acceptance of water supply installations. 9. PN-B-10725: 1997 Water supply, external pipes, requirements and tests 10. PN-EN 12056-2 Gravity drainage systems inside buildings, sanitary drainage, layout and calculation design 11. Technical requirements of Cobrti Instal. Technical conditions for the execution and acceptance of the sewage system. 12. PN EN 1610 Construction and testing of sewage pipes 13. PN-B-01707 Sewerage installations - requirements in design 14. PN-EN 1917: 2004 Manholes and non-manholes made of unreinforced concrete, of concrete reinforced with steel and reinforced concrete fibers 15. PN-B-10729: 1999 Sewerage, drains 16. Regulation of the Minister of the Interior and Administration of August 16, 1999 on the technical conditions for the use of residential buildings</p>	
	Supplementary literature	<p>1. Chudzicki J., Sosnowski S., Sewerage installations: design, execution, operation, Wydawnictwo Siedel-Przywecki 2011 2. Chudzicki J., Sosnowski S., Water supply installations: design, execution, operation, Wydawnictwo Siedel-Przywecki 2011 3. Gaßner A., Sanitary installations: a guide for designers and installers, Wydawnictwo Naukowo-Techniczne 2008</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	<p>- review of current legal acts, standards and literature in the field of work; - preparation of a technical description of the solutions used for the implementation of individual installations; - performing engineering calculations for the selection of diameters and media flow conditions; - preparation of drawing documentation consisting in marking out the wires of individual installations with elements of fittings on the architectural bases provided by the promoter. volume_up content_copy share star_border</p>		
Work placement	Not applicable		