



Subject card

Subject name and code	Engineering Drawing, PG_00058741						
Field of study	Environmental Engineering						
Date of commencement of studies	October 2023	Academic year of realisation of subject			2023/2024		
Education level	first-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			Polish		
Semester of study	1	ECTS credits			1.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Geotechnical and Hydraulic Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Paweł Więclawski					
	Teachers	dr inż. Paweł Więclawski dr inż. Marzena Wójcik					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	15.0	0.0	15
	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	15	5.0		8.0	28	
Subject objectives	To teach students the principles of preparing and reading a technical drawing using a variety of techniques and tools.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_W15] knows the rules of descriptive geometry and technical drawing regarding the recording and reading of architectural drawings, construction and surveying drawings, as well as their preparation with the use of CAD	The student knows the principles of preparing and reading technical drawings. He is able to apply appropriate types and thicknesses of lines, dimension constructions, knows symbols and designations of constructional elements and materials grading. The student is able to prepare a sheet for creating a drawing in AutoCAD using layers. Uses basic tools for editing, dimensioning and printing drawings in AutoCAD.			[SW1] Assessment of factual knowledge		
	[K6_U07] can read architectural, construction and geodesy drawings, and can use the known computer programs to prepare a drawing part of technical documentation for the sanitary industry	Student can read basic technical information from a drawing. Can produce basic drawings: view, section, detail for branch technical documentation.			[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		

Subject contents	<ol style="list-style-type: none"> 1. The basic concepts and principles for preparing technical drawings. 2. Technical writing. 3. Types and thickness of lines used in technical drawings. 4. Rectangular and axonometric projections. 5. Views, sections, layouts, details. 6. Principles of dimensioning on technical drawings. 7. Markings and stencils used on technical drawings. 8. Technical drawings in Autodesk AutoCad 2022. 9. Technical drawing of sanitary installations. 														
Prerequisites and co-requisites															
Assessment methods and criteria	<table border="1" data-bbox="448 510 1487 651"> <thead> <tr> <th data-bbox="448 510 794 546">Subject passing criteria</th> <th data-bbox="794 510 1141 546">Passing threshold</th> <th data-bbox="1141 510 1487 546">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="448 546 794 580">Manual technical drawing</td> <td data-bbox="794 546 1141 580">60.0%</td> <td data-bbox="1141 546 1487 580">40.0%</td> </tr> <tr> <td data-bbox="448 580 794 613">AutoCAD technical drawing</td> <td data-bbox="794 580 1141 613">60.0%</td> <td data-bbox="1141 580 1487 613">30.0%</td> </tr> <tr> <td data-bbox="448 613 794 651">Theoretical part test</td> <td data-bbox="794 613 1141 651">60.0%</td> <td data-bbox="1141 613 1487 651">30.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Manual technical drawing	60.0%	40.0%	AutoCAD technical drawing	60.0%	30.0%	Theoretical part test	60.0%	30.0%
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AutoCAD technical drawing	60.0%	30.0%													
Theoretical part test	60.0%	30.0%													
Recommended reading	Basic literature	<ol style="list-style-type: none"> 1. Burcan J., <i>Podstawy rysunku technicznego</i>, Wydawnictwo Naukowe PWN, Warszawa, 2016. 2. Miśniakiewicz E., Skowroński W., <i>Rysunek techniczny budowlany</i>, Arkady, Warszawa, 2008. 3. Januszewski B., <i>Rysunek techniczny w projektowaniu instalacji sanitarnych</i>. Oficyna Wydawnicza Politechniki Rzeszowskiej, 2001 													
	Supplementary literature	<ol style="list-style-type: none"> 1. Popek M., Wapińska W., <i>Rysunek zawodowy. Instalacje sanitarne</i>. WSiP, 2009 2. Romanowicz P., <i>Rysunek techniczny budowlany z wykorzystaniem narzędzi budowlanych</i>. Wydawnictwo Naukowe PWN, Warszawa, 2021. 													
	eResources addresses	Adresy na platformie eNauczanie: RYSUNEK TECHNICZNY - Inżynieria Środowiska sem. I, studia stacjonarne I stopnia -inżynierskie. - 2023/24 - Moodle ID: 28840 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=28840													
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> 1. Produce a complete technical drawing with dimensioning and descriptions of the indicated structural element. 2. Produce a drawing of the sanitary installation in a single-family building in AutoCAD. 														
Work placement	Not applicable														