



Subject card

Subject name and code	Engineering Drawing, PG_00058741						
Field of study	Environmental Engineering						
Date of commencement of studies	October 2022		Academic year of realisation of subject		2022/2023		
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_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		
	[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		

Subject contents	<div>1. The basic concepts and principles for preparing technical drawings.</div> <div>2. Technical writing.</div> <div>3. Types and thickness of lines used in technical drawings.</div> <div>4. Rectangular and axonometric projections.</div> <div>5. Views, sections, layouts, details.</div> <div>6. Principles of dimensioning on technical drawings.</div> <div>7. Markings and stencils used on technical drawings.</div> <div>8. Technical drawings in Autodesk AutoCad 2022.</div> <div>9. Technical drawing of sanitary installations.</div>		
Prerequisites and co-requisites			
Assessment methods and criteria	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%
Recommended reading	Basic literature	<div>1. Burcan J., <i>Podstawy rysunku technicznego</i>, Wydawnictwo Naukowe PWN, Warszawa, 2016.</div> <div>2. Miśniakiewicz E., Skowroński W., <i>Rysunek techniczny budowlany</i>, Arkady, Warszawa, 2008.</div> <div>3. Januszewski B., <i>Rysunek techniczny w projektowaniu instalacji sanitarnych</i>. Oficyna Wydawnicza Politechniki Rzeszowskiej, 2001</div>	
	Supplementary literature	<div>1. Popek M., Wapińska W., <i>Rysunek zawodowy. Instalacje sanitarne</i>. WSiP, 2009</div> <div>2. Romanowicz P., <i>Rysunek techniczny budowlany z wykorzystaniem narzędzi budowlanych</i>. Wydawnictwo Naukowe PWN, Warszawa, 2021.</div>	
	eResources addresses	Adresy na platformie eNauczanie: RYSUNEK TECHNICZNY - Inżynieria Środowiska sem. I, studia stacjonarne I stopnia -inżynierskie. - 2022/23 - Moodle ID: 25016 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=25016	
Example issues/ example questions/ tasks being completed	<div>1. Produce a complete technical drawing with dimensioning and descriptions of the indicated structural element.</div> <div>2. Produce a drawing of the sanitary installation in a single-family building in AutoCAD.</div>		
Work placement	Not applicable		