



## Subject card

Subject name and code	Computer Aided Design (CAD), PG_00042892						
Field of study	Environmental Engineering						
Date of commencement of studies	October 2020		Academic year of realisation of subject		2021/2022		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Witold Tisler				
	Teachers		dr inż. Witold Tisler				
			dr inż. Kamila Mikina				
			dr inż. Katarzyna Staszewska				
			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	30.0	0.0	0.0	30
	E-learning hours included: 0.0						
	Adresy na platformie eNauczanie:						
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		20.0	55
Subject objectives	The Computer Aided Design course is designed to teach students the basics of working in AutoCAD. During the course, the most important functions of the program will be discussed, such as: drawing, modification of objects, hatching or preparation of a drawing for printing.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W16] 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		Knows the rules of drafting technical drawings. Knows the rules of descriptive geometry Has the knowledge to draft technical drawings according to the aforementioned rules Knows how to draw in AutoCAD.		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U11] can use selected computer programs to support design, including CAD graphics programs		Can prepare technical drawings using AutoCAD.		[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools		
	[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 a civil engineering or a sanitary engineering technical drawing Student is able to use AutoCAD software to create a technical drawing.		[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU5] Assessment of ability to present the results of task		

Subject contents	Learning how to use Autodesk AutoCAD Drawing of basic elements Modification of the elements already drawn Precision Layers Properties Printing Introduction to 3D drawing		
Prerequisites and co-requisites	Classes taught in the previous semesters: descriptive geometry, technical drawing. Knowledge of technical drawing rules. How to use Windows OS. Polish proficiency.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Attendance	100.0%	20.0%
	Test (prepare a drawing)	50.0%	80.0%
Recommended reading	Basic literature	1. AutoCAD help files 2. <a href="http://knowledge.autodesk.com/support/autocad/learn-explore/">http://knowledge.autodesk.com/support/autocad/learn-explore/</a> 3. Andrzej Pikoń: AutoCAD. Pierwsze kroki. Helion. 4. Andrzej Jaskólski: AutoCad. Kurs projektowania parametrycznego i nieparametrycznego w 2D i 3D. PWN.	
	Supplementary literature	any AutoCAD manual	
	eResources addresses		
Example issues/ example questions/ tasks being completed	The student has to prepare and defend a dozen drawing elements prepared on the basis of homework. All of them should be done independently, and their correctness may be consulted during the semester with the teacher during laboratory classes or consultations. Example task: prepare blocks according to guidelines, create text styles and / or dimensions according to guidelines. The final grade is influenced by the presence and work in the laboratory classes.		
Work placement	Not applicable		