



Subject card

Subject name and code	Computer-Aided Design in Electrical Engineering, PG_00062601						
Field of study	TECHNIKI CAD W PRACY INŻYNIERA						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Electrified Transportation -> Faculty of Electrical and Control Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Andrzej Wilk				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0	0.0	60
	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	60		5.0		35.0	100
Subject objectives	The aim of the course using CAD/CAE computer programs is: 1. Learning computer-aided 2D sketching techniques using geometric modification, transformation and constraint tools. 2. Creating 3D computer models using 2D model to 3D model transformation. 3. Acquiring skills in creating partial assemblies and the entire assembly using 3D parts. 4. Learning modern computer-aided technical documentation techniques.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K6_W10		It implements offshore energy resource projects		[SW3] Ocena wiedzy zawartej w opracowaniu tekstowym i projektowym		
	K6_U09		Selects electrical power equipment for various load conditions.		[SU1] Ocena realizacji zadania		
	K6_K01		He selects modern CAD techniques for the implementation of electrical engineering projects.		[SK2] Ocena postępów pracy [SK5] Ocena umiejętności rozwiązywania problemów występujących w praktyce		
	K6_K05		Defines the hazard in emergency situations		[SK3] Ocena umiejętności organizacji pracy		

Subject contents	Course content – lecture Lecture and laboratory		
	1. 2D graphic modeling techniques: modifications, transformations and bonds in 2D.		
	2. 3D modeling techniques		
	3. Creating assemblies based on part files.		
	4. Developing engineering animations.		
	5. Modern methods of preparing technical documentation.		
	6. Basics of modal analysis of solid objects in electrical engineering.		
	7. Selected analyzes of computer-aided engineering calculations.		
	8. 3D modeling of wire and cable harnesses.		
Prerequisites and co-requisites	No requirements		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Lecture 40%, Laboratory 60%	60.0%	100.0%
Recommended reading	Basic literature	Jaskulski A.: Autodesk Inventor Professional 2024 PL / 2024+ / Fusion 360. Metodyka efektywnego projektowania, wydawnictwo HELION	
	Supplementary literature	Bordino A.: Autodesk Inventor 2023 Cookbook. A guide to gaining advanced modeling and automation skills for design engineers through actionable recipes, eBook	
	eResources addresses		
Example issues/ example questions/ tasks being completed	1. What are the tools for creating assemblies or subassemblies from parts of files? 2. What are adaptive sketches and parts?		
Practical activities within the subject	Not applicable		

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