

。 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Engineer Graphics, PG_00060838								
Field of study	Chemical Technology								
Date of commencement of studies	October 2025		Academic year of realisation of subject			2025/2026			
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			2.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Department of Process Engineering and Chemical Technology -> Faculty of Chemistry -> Wydziały Politechniki Gdańskiej						lziały		
Name and surname	Subject supervisor		dr inż. Iwona Cichowska-Kopczyńska						
of lecturer (lecturers)	Teachers								
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Project	t	Seminar	SUM	
of instruction	Number of study hours	0.0	0.0	30.0	0.0		0.0	30	
	E-learning hours included: 0.0								
Learning activity and number of study hours	Learning activity	Participation in classes includ plan	n didactic ed in study	Participation in consultation hours		Self-study		SUM	
	Number of study hours	30		2.0		18.0		50	
Subject objectives	I ne aim of the course is to obtain the student's knowledge of the basics of descriptive geometry, construction notation and methods of mapping multi-dimensional space on a two-dimensional drawing and designing multi-dimensional elements using CAD systems. The acquired knowledge will enable, first of all, reading technical machine drawings and technological diagrams, as well as making drawings independently. technical and design of chemical industry equipment.								
Learning outcomes	Course out	come	Subj	ect outcome			Method of ve	rification	
Subject contents	 2D design: technical drawing basics, isometric drawing, projections. 3D design: creating your own templates, ISO-PL idw drawing template, Part model template, assembly model template; Introduction to user interface, activating an existing project, toolbars and tools, objects views; Introduction to parts design: parametric, mathematical model of the solids, geometric model of the solids, parameters and decision variables, 3D objects, 3D objects in 2D modeling; Concepts related to derivative model technique, typical part design process, part modeling; Editing of documentation; Modification of the design from the level of a model or drawing; 2D parametric modeling, sketches and sketch planes, parametric sketch planes, define sketch planes; Parametric 2D modeling operations; Modeling methods, standard modeling tools and techniques, elements of classic dialog boxes, elements of new type dialog boxes; Tool work process (Workflow); Input geometry; Modeling operation parameters; Modeling method; Advanced properties; Profile definition algorithm; Sketch sharing; Sharing of construction elements; Extruding with a profile (Extrude); Base element; Other pull-out elements; To Next Extrude; To (To) Extrude; Between Extrude; Through draw; Profile rotation (Revolve); Rotation by angle (Angle); To Next; Full rotation; Reorder modeling operations; Sweep; Unbending surfaces (Loft); Ribs (Rib); Inline elements; Holes: types and types of holes, methods of determining the location of holes; Thread and hole definition files; Hole definition algorithm: Concentric method, Linear method, From Sketch method; Editing and editing of 2D part documentation; drawing tile types, preliminary steps; creating a drawing file; drawing application options; document settings; drawing templates; fixed drawing elements edition of the sheet layout; i-properties editing; style of objects in the drawing file - drawing standard; general standard settings; standard styles available; default values of objects; main and dependent styles; lay								
Prerequisites and co-requisites	Computer skills, knowledge of the office package, files processing, geometry, dimensioning principles, basics thermodynamics, process engineering, chemical technology, technological principles, green principles chemistry, green engineering.								

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade		
	sprawdziany wiedzy teoretycznej	60.0%	20.0%		
	wykonanie konstrukcji	60.0%	40.0%		
	wykonanie konstrukcji	60.0%	40.0%		
Recommended reading	Basic literature	 A. Jaskulski "AutoCAD 2021/LT2021/306+" PWN A. Jaskulski "Autodesk Inventor Professional 2021PL/2021+/Fusion 360", PWN A. Jaskulski, Autodesk Inventor Professional 2021 PL / 2021+ / Fusion 360. Metodyka projektowania 			
	Supplementary literature	ISO standards for technical drawings			
	eResources addresses				
Example issues/ example questions/ tasks being completed	basic geometric constructions, drawing orthogonal projections, isometric projections, developing project documentation, 3D constructions of mechanical elements, using libraries of materials and elements				
Work placement	Not applicable				

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