GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Computer Aided Design (CAD), PG_00060461						
Field of study	Mechanical and Naval Engineering						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
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	Part-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		5.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Division Of Marine Power Plants -> Institute Of Naval Architecture -> Faculty Of Mechanical Engineering And Ship Technology -> Wydziały Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Piotr Bzura				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	9.0	0.0	0.0	27.0	0.0	36
	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	36		8.0		81.0	125
Subject objectives	The aim is to acquiring the skills and knowledge necessary to design and make drawings of the indicated part of device using 3D software (Autodesk Inventor).						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U03] is able to identify, formulate and develop the documentation of a simple design or technological task, including the description of the results of this task in Polish or in a foreign language and to present the results using computer software or other aiding tools	The student knows the exemplary	[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject
[K6_W08] has a knowledge of the analysis and design of selected technical systems, machines and technical equipment, selection of construction materials, manufacturing and operation, including their life cycle	The student is able to select the optimal device solution for the designed purpose.	[SW3] Assessment of knowledge contained in written work and projects
[K6_W11] has knowledge of analysis, design, technology and manufacturing of selected technical systems, machinery and equipment, metrology and quality control, knows and understands methods of measurement and calculation of basic quantities describing the operation of technical systems, knows basic calculation methods used to analyse experimental results	The student knows examples of tools supporting design processes and is able to use them	[SW2] Assessment of knowledge contained in presentation
[K6_U07] is able to design a typical construction of a mechanical device, component or a testing station using appropriate methods and tools, adhering to the set usage criteria	Students will understand the purpose and principles of computer-aided design	[SU1] Assessment of task fulfilment
[K6_U11] can use computer-aided design, production and operation tools for ocean technology objects and systems	The student is familiar with various design aid solutions	[SU5] Assessment of ability to present the results of task

Subject contents

Technical drawing, basics of machine construction, engineering graphics, 3D modeling

Prerequisites and co-requisites

Knowledge of the basic principles of creating drawing documentation, technical drawings, basic knowledge of the strength of materials and mechanics.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Final project	50.0%	50.0%
Software knowledge	50.0%	50.0%

Recommended reading	Basic literature	1. Rysunek techniczny w mechanice i budowie maszyn Paweł Romanowicz 2. Rysunek techniczny Krzysztof Filipowicz, Mariusz Kuczaj, Aleksander Kowal 3. Podstawy rysunku technicznego Jan Burcan 4. AutoCad 2019 Pierwsze kroki Andrzej Pikoń 5. Modelowanie w programie Solid Edge Podstawy Tomasz Gawroński 6. Dietrich M.: Podstawy Konstrukcji Maszyn, tomy 1,2 i 3 7. Kochanowski M.: Wybrane zagadnienia z Podstaw Konstrukcji Maszyn, skrypt PG 2002r. 8. Dobrzański J.: Rysunek Techniczny Maszynowy 9. Spotts M. F., Design of Machine Elements, Prentice Hall 10. Autodesk Inventor 2014. Oficjalny podręcznik
	Supplementary literature	Fabian Stasiak Zbiór ćwiczeń Autodesk Inventor 2018 Kurs podstawowy
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Based on the presented examples and assumptions, design and prepare assembly drawings and manufacturing documentation of selected device elements.	
Work placement	Not applicable	

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