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 2024		Academic year of realisation of subject	2025/2026			
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						
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).						

<table>
<tr><td>Learning outcomes</td><td>
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<tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr>
<tr><td>[K6_U11] can use computer-aided design, production and operation tools for ocean technology objects and systems</td><td>The student is familiar with various design aid solutions</td><td>[SU5] Assessment of ability to present the results of task</td></tr>
<tr><td>[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</td><td>Students will understand the purpose and principles of computer-aided design</td><td>[SU1] Assessment of task fulfilment</td></tr>
<tr><td>[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</td><td>The student knows examples of tools supporting design processes and is able to use them</td><td>[SW2] Assessment of knowledge contained in presentation</td></tr>
<tr><td>[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</td><td>The student is able to select the optimal device solution for the designed purpose.</td><td>[SW3] Assessment of knowledge contained in written work and projects</td></tr>
<tr><td>[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</td><td>The student knows the exemplary</td><td>[SU3] Assessment of ability to use knowledge gained from the subject
[SU2] Assessment of ability to analyse information</td></tr>
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<tr><td>Subject contents</td><td>Technical drawing, basics of machine construction, engineering graphics, 3D modeling</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Knowledge of the basic principles of creating drawing documentation, technical drawings, basic knowledge of the strength of materials and mechanics.</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Software knowledge</td><td>50.0%</td><td>50.0%</td></tr>
<tr><td>Final project</td><td>50.0%</td><td>50.0%</td></tr>
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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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