GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Engineering Graphics I, PG_00040031		
Field of study	Mechanical Engineering, Mechanical Engineering		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2020/2021
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	e-learning
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Zakład Mechaniki Stosowanej i Biomechaniki -> Institute of Mechanics and Machine Design -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Wiktoria Wojnicz	
	Teachers	dr inż. Krzysztof Druet	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	15.0	0.0	30

E-learning hours included: 30.0

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	30	5.0	65.0	100

Subject objectives

To acquaint students with the methods of mapping the geometric form of technical objects. To acquaint students with the basics of technical drawing of a machine (views, sections, dimensioning, tolerating dimensions, marking the condition of the surface, presenting threaded connections).

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W07] knows the principles of engineering drawing, standards and tools used in preparation of technical documentation	A student knows the basics of technical drawing used in mechanical engineering.	[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects
[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	A student is able to make an executive drawing of an element of a mechanical device.	[SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools

Subject contents

The main program content of the lectures
Projection methods. Monge's orthogonal projection method. Mapping in rectangular projections and in axonometry of a point, a line, a plane, plane figures and solids. Pierce points and sections. Presentation of objects in a engineering drawing - views, sections, section examples, partial sections, etc. General principles of dimensioning. Dimension tolerance. Determination of the surface condition of machine elements. Representation of threaded connections.
The main content of the exercises
Mapping in orthographic projections and in axonometry of a point in space. Simple in space, projections of flat figures. Straight line piercing points, solid sections by planes. Solids and machine elements in rectangular projections and in axonometry. Machine element cross-sections. Dimensioning of a machine element.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Test	50.0%	60.0%
Exercise tasks	100.0%	40.0%

Recommended reading	Basic literature	Dobrzański T.: Rysunek techniczny maszynowy. Warszawa: WN-T. Rigall A., Sadaj J.: Zapis konstrukcji. Część I. Geometria wykreślna. Gdańsk: Wyd. "JESAD" 1994.
	Supplementary literature	Burcan J.: Podstawy rysunku technicznego. Warszawa: WN-T 2006. Gutowski A.: Zadania z rysunku technicznego. Warszawa: Wyd. Szkolne i Pedagogiczne 1992.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Mapping in rectangular projections and in axonometry: point, line, plane figures, solids and machine elements. Straight line piercing points, solid sections by planes. Machine element cross-sections. Dimensioning of a machine element.	
Work placement	Not applicable	