



Subject card

Subject name and code	Engineering Graphics II, PG_00040038						
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			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			2.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Institute of Mechanics and Machine Design -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Michał Wasilczuk				
	Teachers		dr inż. Krzysztof Druet				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	8.0	0.0	0.0	8.0	0.0	16
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	16	5.0		29.0		50
Subject objectives	To acquaint students with the methods of mapping the geometric form of technical objects. To acquaint students with the basics of machine engineering drawing (presenting threaded connections, presenting welded joints and other permanent connections, presenting mechanical drive systems and their elements - shafts or axles, bearings, mechanical transmissions, seals, etc.). To acquaint students with the basics of creating technical documentation.						
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	A student is able to make executive drawings of machine elements and assembly drawings of mechanical devices.			[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject		
	[K6_W07] knows the principles of engineering drawing, standards and tools used in preparation of technical documentation	A student knows the rules and standards of technical drawing and their application in the preparation of technical documentation			[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects		
Subject contents	The main program content of the lectures Presentation of welded joints and other permanent joints. Manufacturing drawings of shafts or axles. Representation of bearings (especially rolling bearings of various kinds). Presentation of mechanical transmissions: - gears, - chain wheels, - pulleys, - pin-hub connections, - shaft seals, - assembly drawings of mechanical transmissions. Technical Documentation. The main content of the exercises General assembly drawing of the subassembly assembled from threaded elements (e.g. a hydraulic connection). Executive drawing of the welded element. General assembly drawing of the drive subassembly (roller bearing shaft, gear wheel, key connections, snap rings, lock nut with toothed washer, sealing ring, bolted housing covers, etc.). Manufacturing drawing of the shaft.						
Prerequisites and co-requisites	Engineering graphics I						
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.				

	Supplementary literature	Burcan J.: Podstawy rysunku technicznego. Warszawa: WN-T 2006.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Assembly drawing of the subassembly assembled from threaded elements. Executive drawing of the welded element. Assembly drawing of the drive component. Executive drawing of the shaft.	
Work placement	Not applicable	