



Subject card

Subject name and code	Selected aspects of Machinery Operation, PG_00039387						
Field of study	Medical and Mechanical Engineering, Medical and Mechanical Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2022/2023		
Education level	first-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	6	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		dr hab. inż. Jacek Łubiński				
	Teachers		dr hab. inż. Jacek Łubiński mgr inż. Marek Łubniewski mgr inż. Katarzyna Mazur				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	0.0	0.0	15
	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	15		5.0		30.0	50
Subject objectives	The development of the practical approach to the issues of machines' use in real-life conditions with special attention to reliability, planned overhauls, failure preventions and maintaining operational readiness.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_U08	Development of skills in practical application of tools and methods learned to solving engineering problems.			[SU1] Assessment of task fulfilment		
	K6_W07	Integration of skills and knowledge on design and use of mechanical devices (machines)			[SW3] Assessment of knowledge contained in written work and projects		
Subject contents	Practical analysis of technical problems based on real - life examples.						
Prerequisites and co-requisites	Engineering mechanics, materials science, addition and subtraction of forces, evaluation of support reactions and load conditions, physical properties of engineering materials. Mathematics: calculus, symbolic equations manipulation, linear equation systems, trigonometry, vector calculus, differentiation and integration.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Group work report		50.0%		100.0%		
Recommended reading	Basic literature		Fundamentals of machine design Engineering graphics Mechanical Engineer's handbook Machine Design by Robert L. Norton				
	Supplementary literature		Fizyka, Haliday & Resnick The Fabric of Reality, D.Deutsch "Catch 22", Joseph Heller				
	eResources addresses						
Example issues/ example questions/ tasks being completed	Evaluation of the correctness of the assumed design guidelines for an existing mechanical device. Investigation into the cause of repeated failures of a mechanical device. Modification concept for a mechanical device to improve its functioning.						
Work placement	Not applicable						