



## Subject card

Subject name and code	, PG_00056085						
Field of study	Mechanical and Medical Engineering						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2023/2024		
Education level	first-cycle studies	Subject group					
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			1.0		
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. Marek Galewski				
	Teachers		mgr inż. Grzegorz Banaszek				
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	0.0		0.0		15
Subject objectives	Teaching students basics of programming in Matlab environment						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W07] he/she is able to design, manufacture and utilize machine parts and technical devices, he/she can prepare a technical documentation		Student writes simple function / programmes in Matlab environment		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U06] he/she has skills to work in industry and follow the rules of safety regulations, he/she is able to analyze basic economics problems to delineate the direction of solution by using engineering methods		Student processes data files typical for medical applications		[SU3] Assessment of ability to use knowledge gained from the subject		
	[K6_W13] he/she has knowledge related to application of engineering approaches in medicine or application of medical devices and rehabilitation devices		Student describes applications of essential programming tools		[SW1] Assessment of factual knowledge		
[K6_U08] he/she is able to assess whether proposed methods and tools can be used in practice to solve simple engineering task related to machine design, manufacturing and utilization		Student selects tools and programming functions adequate to a given task		[SU4] Assessment of ability to use methods and tools			
Subject contents	Matlab - revision of basics: matrices, plots, scripts Files operations Basics of programming: functions, loops, conditional statements Elements of algorithms Rules of writing computer programs source code ODE solving Spectrum calculation						
Prerequisites and co-requisites	Knowledge on the subjects of "basics if IT in medicine"						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Finishing exercises given during classes	60.0%	35.0%
	Written test	55.0%	65.0%
Recommended reading	Basic literature	mathworks.com website  B. Hahn, D. Valentinr, Essential MATLAB for Engineers and Scientists, 2019	
	Supplementary literature	Matlab tutorials	
	eResources addresses	Adresy na platformie eNauczanie: Programowanie w medycynie, L, IMM, stacjonarne, zimowy 23/24, (PG_00056085) - Moodle ID: 34379 <a href="https://enauzanie.pg.edu.pl/moodle/course/view.php?id=34379">https://enauzanie.pg.edu.pl/moodle/course/view.php?id=34379</a>	
Example issues/ example questions/ tasks being completed	A list of exemplary tasks / questions will be presented at least 1 mont before the final test		
Work placement	Not applicable		