GDAŃSK UNIVERSITY OF TECHNOLOGY

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 / programms 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 applictions 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 programing 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: funcions, loops, conditional statements
Elements of algorithms
Rules of writing computer programs source code
ODE solving
Spectrum calculation

Prerequisites and co-requisites

Konwledge 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 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34379	
Example issues/ example questions/ tasks being completed	A list of examplary tasks / questions will be presented at least 1 mont before the final test		
Work placement	Not applicable		

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