

。 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Experimental methods in physics, PG_00059251								
Field of study	Civil Engineering								
Date of commencement of studies	October 2023		Academic year of realisation of subject			2023/2024			
Education level	first-cycle studies		Subject group			Obligatory subject group in the field of study			
Mode of study	Full-time studies		Mode of delivery			at the university			
Year of study	1		Language of instruction			Polish			
Semester of study	2		ECTS credits			1.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Institute of Nanotechnology and Materials Engineering -> Faculty of Applied Physics and Mathematics								
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Tadeusz Miruszewski							
	Teachers		dr inż. Marek Chmielewski						
			Daniel Jaworski						
			mgr inż. Patryk Błaszczak						
			dr hab. inż. Jakub Karczewski						
			Michał Macieiewski						
			dr. bob. jož 1. oprak Distrovaki						
			UI HAD. IIIZ. LESZEK PIULIUWSKI						
		dr inż. Tadeusz Miruszewski							
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	t	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	arning activity Participation in classes include plan		didactic Participation in ed in study consultation hours		Self-study		SUM	
	Number of study hours	nber of study 15 Irs		2.0		8.0		25	
Subject objectives	Students realize five measurement3. Mea expansion5. Resistal process the results a	laboratory expe surement of the nce measureme nd discuss the	eriments:1. Me e modulus of el ent using a Wh obtained result	asurement of t asticity4. Meas eatstone bridg ts.	he cente suremen eStuden	r of gra t of the ts are to	ivity2. Young coefficient of o perform me	's modulus Flinear easurements,	

Learning outcomes	Course outcome	Subject outcome	Method of verification			
	[K6_W01] Demonstrate knowledge and understanding of mathematics as well as sciences and engineering disciplines underlying civil engineering at a level necessary to achieve the other programme outcomes.	Students gets with the measuring apparatus, independently realizes measurments, discusses the results of measurments.	[SW3] Assessment of knowledge contained in written work and projects			
	[K6_U01] Apply knowledge and understanding of mathematics as well as sciences and engineering disciplines underlying civil engineering to solve engineering problems and issues.	The student will learn to use measuring equipment, learn about the linear regression method, learn to estimate measurement uncertainties.	[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment			
Subject contents	Measurement of Young's modulus, measurement of the spring constant, measurement of the linear expansion coefficient, measurement of the center of mass of a system of bodies and measurement of the resistance of individual resistances					
Prerequisites and co-requisites						
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade			
	taking measurements and reports	50.0%	100.0%			
Recommended reading	Basic literature	Exercise instructions: https://ftims.pg.edu.pl/wydzial/laboratoria-wydzialowe/laboratorium-z- fizyki-czesc-1				
	Supplementary literature	Fundamentals of Physics D. Halliday, R Resnick, J. Walker				
	eResources addresses	Adresy na platformie eNauczanie:				
Example issues/ example questions/ tasks being completed	Graph linearizationLinear regression methodCorrect record of the final result					
Work placement	Not applicable					

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