

Subject card

Subject name and code	Physical laboratory II, PG_00028407							
Field of study	Nanotechnology							
Date of commencement of studies	October 2020		Academic year of realisation of subject			2021/2022		
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	Full-time studies		Mode of delivery			at the university		
Year of study	2		Language of instruction			Polish		
Semester of study	3		ECTS credits			2.0		
Learning profile	general academic profile		Assessment form			assessment		
Conducting unit	Zakład ceramiki -> Instytut Nanotechnologii i Inżynierii Materiałowej -> Faculty of Applied Physics and Mathematics							
Name and surname	Subject supervisor	dr inż. Tadeusz Miruszewski						
of lecturer (lecturers)	Teachers		dr inż. Marta Prześniak-Welenc					
			dr inż. Marek					
			dr inż. Tadeusz Miruszewski					
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
of instruction	Number of study hours	0.0	0.0	30.0	0.0		0.0	30
	E-learning hours included: 0.0							
	Adresy na platformie eNauczanie: Laboratorium z fizyki II - Moodle ID: 18754 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=18754 Laboratorium z fizyki II - Moodle ID: 18754 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=18754							
Learning activity and number of study hours	Learning activity	Participation in classes includ	n didactic ed in study	Participation in consultation hours		Self-study		SUM
	Number of study hours	30		2.0		18.0		50
Subject objectives	Introduction with the basic laws of classical physics. Verification of the theory in eksperymencie.Nabycie ability to analyze the results. The use of analysis of experimental data in practice.							
Learning outcomes	Course outcome		Subject outcome			Method of verification		
	K6_U01					[SU1] Assessment of task fulfilment		
	K6_W03					[SW1] Assessment of factual knowledge		
	K6_U04					[SU1] Assessment of task fulfilment		
Subject contents	Topics include: kinematics of linear motion, Newton's laws of motion, oscillatory motion, waves, mechanical, and rigid body dynamics traversing phase transitions bodies, elements of thermodynamics.							
Prerequisites and co-requisites	The course is dedicated to students who have completed a course of Physics II (sem. II)							
Assessment methods	Subject passin	Passing threshold			Percentage of the final grade			
and criteria			50.0%			100.0%		

Recommended reading	Basic literature	D. Halliday, R. Resnick, J. Walker, Fundamentals of Physics, Oxford University Press,M.Herman, A. Kalestyński, L.Widomski, Fundamenta of Physics for candidates for universities and students, WN PWN Warsawhttp://ftims.pg.edu.pl/laboratorium-z-fizyki-i-pracownia				
	Supplementary literature	absence				
	eResources addresses	Laboratorium z fizyki II - Moodle ID: 18754 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=18754 Laboratorium z fizyki II - Moodle ID: 18754 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=18754				
Example issues/ example questions/ tasks being completed	Explain based on the internal structure of solids the difference between the area of plastic deformation and elastic deformation area;Heat definition phaseAs using the method of least squares determined from measurements of time free-fall acceleration due to gravity					
Work placement	Not applicable					