

GDAŃSK UNIVERSITY

Subject card

Subject name and code	Physics I, PG_00050089								
Field of study	Geodesy and Cartography								
Date of commencement of studies	October 2020		Academic year of realisation of subject			2020/2021			
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	1		ECTS credits			4.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Department of Solid State Physics -> Faculty of Applied Physics and Mathematics								
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Anna Rybicka							
	Teachers		dr inż. Anna Rybicka						
			dr inż. Iga Szpunar						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project		Seminar	SUM	
	Number of study hours	30.0	30.0	0.0	0.0		0.0	60	
	E-learning hours included: 0.0								
	Adresy na platformie eNauczanie: FIZYKA I - GEODEZJA - Moodle ID: 6267 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=6267								
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	60		0.0		40.0		100	
Subject objectives	Learning the basic laws of classical physics. Analysis of physical phenomena and solving technical problems based on the physical laws.								
Learning outcomes	Course outcome		Subject outcome			Method of verification			
	[K6_W01] has basic knowledge and understands the concepts of physics which allow to use optical and immersive instruments as well as positioning and satellite imaging		The student knows fundamental problems od classical physics; understand physical laws and on their basis can analyze technical problems.			[SW1] Assessment of factual knowledge			
	[K6_U01] can apply the principles of physics and mathematics to a simple verification of measurement and computational methods and their results		The student is able to analyze experimental results and formulate conclusions based of them.			[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			

Subject contents	Kinetics of progresive and rotational motion.						
	Newton's laws.Dynamics of progresive and rotational motion.						
	Work and energy. Principles of conservation of momentum and energy.						
	Harmonic and wave motion.						
	Elektrostatics. Coulomb's and Gauss's laws.						
	The magnetic fielsd. , Ampere's, Biot's - Savart's, Faraday's laws.						
	Maxwell's equations.						
Prerequisites and co-requisites	Course for students who completed mathematisc and physics at the advanced level in the secondary school.						
Assessment methods	Subject passing criteria	Passing threshold	Percentage of the final grade				
and criteria	test I	50.0%	50.0%				
	test II	50.0%	50.0%				
Recommended reading	Basic literature e-book: UNIVERSITY PHYSICS (www.ftims.pg.edu.pl/Studenci/ Materiały dydaktyczne) Resnick, Halliday, Walker, FUNDAMENTALS OF PHYSICS, John						
	Supplementary literature	Orear, PHYSICS, Macmillam Publis	hing Co.				
	eResources addresses	FIZYKA I - GEODEZJA - Moodle ID: 6267 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=6267					
Example issues/ example questions/ tasks being completed	Kinematic equations of motion in gravitational field.						
lashs being completed	Bodies systems - forces.						
	Elastic and inelastic collisions.						
	Rotary movement. Rolling without skidding.						
	Mathematical and physical pendulum.						
	Electric field strenght and potential.						
	Movement of charge in an electric and magnetic field.						
	Net applicable						
work placement	Not applicable						