

。 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Physics II, PG_00044797								
Field of study	Geodesy and Cartography								
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			5.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Department of Solid State Physics -> Faculty of Applied Physics and Mathematics								
Name and surname	Subject supervisor		dr inż. Anna Rybicka						
of lecturer (lecturers)	Teachers		dr inż. Anna Rybicka						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
	Number of study hours	30.0	30.0	0.0	0.0		0.0	60	
	E-learning hours included: 0.0								
Learning activity and number of study hours	Learning activity	Participation in classes includ plan	didactic Participation in consultation hours		Self-study		SUM		
	Number of study hours	60		9.0		56.0		125	
Subject objectives	Knowledge of electrical and magnetical field. Knowledge of geometrical and wave optics. Knowledge of basic modern physics problem. Ability to analyze physical phenomena and solving engineering problems.								
Learning outcomes	Course outcome		Subject outcome			Method of verification			
	[K6_W01] has knowledge and understands the concepts of physics which allow to use optical and immersive instruments as well as positioning and satellite imaging		Students recognize basic physical phenomena; can formulate, explain and use fundamental laws of classical and modern physics.			[SW1] Assessment of factual knowledge			
	[K6_U02] can make basic geodetic drawings and read an architectural technical drawing		Students understand physical laws and solve problems on the basis of them.			[SU3] Assessment of ability to use knowledge gained from the subject			

Subject contents	ect contents Basic laws of electicity and magnetism (Coulomb's, Gauss's, Ampere's, Biot-Savart's, Faraday's I						
	Basic laws of geometric and wave optics.						
	Black body radiation. Quantum theory of light. Models of an atom.						
	Radioactivity.						
Prerequisites and co-requisites	Continuation of course of physics, given during the first semester.						
Assessment methods	Subject passing criteria	Passing threshold	Percentage of the final grade				
and criteria	Practical test I	50.0%	50.0%				
	Practical test II	50.0%	50.0%				
Recommended reading	Basic literature	Ohanian, Markert, Physics for Engineers and Scisntists, NY Norton, 2007 www.ftims.pg.edu.pl/Studenci/Materiały dydaktyczne (University Physics)					
		Tipler, Llowellyn, Medern Physics, 6ed Freeman, 2012					
		Adreau no platformia o Noussania					
		FIZYKA II - GiK_23/24 - Moodle ID: 36147 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=36147					
Example issues/ example questions/ tasks being completed	1. Determine the electric field, coming from a given distribution of point charges.						
	2. Describe the motion of a charged particle in a magnetic field.						
	3. Determine the velocity of electrons in the photoelectric effect.						
	4.Determine the energy of the electron according to Bohr's postulates.						
Work placement	Not applicable						

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