



Subject card

Subject name and code	Physics, PG_00018183						
Field of study	Chemistry in Construction Engineering						
Date of commencement of studies	October 2022		Academic year of realisation of subject		2022/2023		
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		6.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department of Theoretical Physics and Quantum Information -> Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Ewa Erdmann				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	15.0	15.0	0.0	0.0	60
	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	60		5.0		85.0	150
Subject objectives	Introduction to elementary methods and laws of physics						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K6_U02		Lab exercise allow to solve experimental physics problems in groups and individually		[SU2] Assessment of ability to analyse information		
	K6_W02		Knows fundamental physical laws and is able to solve concrete models		[SU1] Assessment of task fulfilment		

Subject contents	Acoustics		
	Fluid mechanics		
	Analysis of physical measurements		
	Kinetic theory of gases		
	Thermodynamics		
	Electric field		
	Electric current		
	Magnetic field		
	Electric network		
	Geometric optics		
	Wave optics		
	Old quantum theory		
	Atomic structure		
	Solid state physics		
Prerequisites and co-requisites	Passing the subject "physics"		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	lab	51.0%	20.0%
	exam	51.0%	50.0%
	exercises	51.0%	30.0%
Recommended reading	Basic literature	Dawid Halliday, Robert Resnick, Jearl Walker, Podstawy Fizyki, tomy 2, 3 i 4, PWN, Warszawa 2006. Cz. Bobrowski. Fizyka. Krótki kurs. WNT, Warszawa (dowolne wydanie).	
	Supplementary literature	Berkeley course of physics "University Physics" openstax, 2018	
	eResources addresses	Adresy na platformie eNauczanie:	
	Example issues/ example questions/ tasks being completed	Gauss law for electric field and an example of its use.	
Properties of the Hydrogen atom spectrum.			
Calculation of measurement error using exact differential method			
Work placement	Not applicable		