



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	<p>Acoustics</p> <p>Fluid mechanics</p> <p>Analysis of physical measurements</p> <p>Kinetic theory of gases</p> <p>Thermodynamics</p> <p>Electric field</p> <p>Electric current</p> <p>Magnetic field</p> <p>Electric network</p> <p>Geometric optics</p> <p>Wave optics</p> <p>Old quantum theory</p> <p>Atomic structure</p> <p>Solid state physics</p>														
Prerequisites and co-requisites	Passing the subject "physics"														
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="453 1263 794 1301">Subject passing criteria</th> <th data-bbox="794 1263 1139 1301">Passing threshold</th> <th data-bbox="1139 1263 1473 1301">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="453 1301 794 1330">lab</td> <td data-bbox="794 1301 1139 1330">51.0%</td> <td data-bbox="1139 1301 1473 1330">20.0%</td> </tr> <tr> <td data-bbox="453 1330 794 1359">exam</td> <td data-bbox="794 1330 1139 1359">51.0%</td> <td data-bbox="1139 1330 1473 1359">50.0%</td> </tr> <tr> <td data-bbox="453 1359 794 1402">exercises</td> <td data-bbox="794 1359 1139 1402">51.0%</td> <td data-bbox="1139 1359 1473 1402">30.0%</td> </tr> </tbody> </table>			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%
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Recommended reading	<p>Basic literature</p>	<p>Dawid Halliday, Robert Resnick, Jearl Walker, Podstawy Fizyki, tomy 2, 3 i 4, PWN, Warszawa 2006.</p> <p>Cz. Bobrowski. Fizyka. Krótki kurs. WNT, Warszawa (dowolne wydanie).</p>													
	<p>Supplementary literature</p>	<p>Berkeley course of physics</p> <p>"University Physics" openstax, 2018</p>													
	<p>eResources addresses</p>	<p>Adresy na platformie eNauczanie:</p>													
Example issues/ example questions/ tasks being completed	<p>Gauss law for electric field and an example of its use.</p> <p>Properties of the Hydrogen atom spectrum.</p> <p>Calculation of measurement error using exact differential method</p>														
Work placement	Not applicable														