



## Subject card

Subject name and code	Technical Physics, PG_00044373						
Field of study	Engineering Management						
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	1	ECTS credits			5.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Atomic, Molecular and Optical Physics -> Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Patrycja Stefańska-Ptaszek				
	Teachers		dr Maciej Kuna dr inż. Patrycja Stefańska-Ptaszek mgr inż. Natalia Tańska				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0	0.0	60
	E-learning hours included: 0.0						
Fizyka Techniczna ZIE 2022/23 - Moodle ID: 26135 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=26135">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=26135</a>							
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		6.0		59.0	125
Subject objectives	Basic knowledge of physics. Ability to use basic physical laws. Ability to interpret basic physical phenomena.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U01] interprets and analyses the phenomena and processes taking place in the economy and organisation using basic theoretical knowledge of economics, management and science		Basic knowledge of physics. Ability to use basic physical laws. Ability to interpret basic physical phenomena.		[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		
[K6_W11] has the basic knowledge of mathematics, physics and chemistry necessary to solve technical problems		Basic knowledge of physics. Ability to use basic physical laws. Ability to interpret basic physical phenomena.		[SW1] Assessment of factual knowledge			
Subject contents	Mechanics Optics Heat Waves Statistical physics Atomic physics Nuclear Physics Quantum Physics						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	laboratories		50.0%		50.0%		
	final exam		50.0%		50.0%		
Recommended reading	Basic literature		D. Halliday, R. Resnick and J. Walker "Podstawy fizyki" PWN tom 1-5 "Feynmana Wykłady z Fizyki" PWN Warszawa J. Orear, <i>Fizyka</i> , WNT, Tom 1 i 2				

	Supplementary literature	Paul G. Hewitt "Fizyka wokół nas" PWN Warszawa  I. W. Sawieliew, <i>Wykłady z Fizyki</i> , PWN, Tom 1-3
	eResources addresses	Podstawowe <a href="https://enauczanie.pg.edu.pl/moodle/enrol/index.php?id=26135">https://enauczanie.pg.edu.pl/moodle/enrol/index.php?id=26135</a> - ecourse
Example issues/ example questions/ tasks being completed	The laws of classical mechanics	
Work placement	Not applicable	