



## Subject card

Subject name and code	Physics, PG_00029466						
Field of study	Mathematics						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2024/2025		
Education level	first-cycle studies	Subject group					
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			4.0		
Learning profile	general academic profile	Assessment form			assessment		
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 inż. Patrycja Stefańska-Ptaszek					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	15.0	30.0	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		35.0		100
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_U06	As part of numerical exercises, the student applies knowledge of the function integration.			[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		
	K6_U09	Student is able to solve physical problems as part of the classes			[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		
	K6_W03	As part of the course, the student gains knowledge about selected physical laws, theories, measurement methods, is able to explain and describe them.			[SW1] Assessment of factual knowledge		
K6_U05	Student is able to analyze and interpret physical phenomena, describe them mathematically and derive appropriate physical relations.			[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment			
Subject contents	Mechanics  Geometrical and wave optics  Thermodynamics  Selected topics of contemporary physics						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	final exam	50.0%	45.0%
	classes	50.0%	35.0%
	laboratories	50.0%	20.0%
Recommended reading	Basic literature	D. Halliday, R. Resnick and J. Walker "Podstawy fizyki" PWN tom 1-5 "Feynmana Wykłady z Fizyki" PWN Warszawa	
	Supplementary literature	Paul G. Hewitt "Fizyka wokół nas" PWN Warszawa	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Conservation of energy, momentum and angular momentum. Simple harmonic motion. Longitudinal wave energy density. Interference phenomenon. Ohm's law. Lensmaker's equation		
Work placement	Not applicable		