



Subject card

Subject name and code	Physics, PG_00029466						
Field of study	Mathematics						
Date of commencement of studies	October 2021		Academic year of realisation of subject		2023/2024		
Education level	first-cycle studies		Subject group		Optional subject group Subject group related to scientific research in the field of study		
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. Ireneusz Linert				
			dr inż. Patrycja Stefańska-Ptaszek				
			dr inż. Paweł Syty				
		dr inż. Marcin Dampc					
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_U05		Student is able to analyze and interpret physical phenomena, describe them mathematically and derive appropriate physical relations.		[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		
	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_U09		Student is able to solve physical problems as part of the classes		[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		
	K6_U06		As part of numerical exercises, the student applies knowledge of the function integration.		[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		
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
	laboratories	50.0%	20.0%
	classes	50.0%	35.0%
	final exam	50.0%	45.0%
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 phenomenonOhm's lawLensmaker's equation		
Work placement	Not applicable		