

Subject card

Subject name and code	Physics, PG_00053438						
Field of study	Environmental Protection						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study 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	1		Language of instruction		Polish		
Semester of study	1		ECTS credits		3.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Stanisław Pogorzelski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	30.0	0.0	0.0	0.0	30
	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	30		5.0		40.0	75
Subject objectives	The goal of the subject is to understand the basic physical phenomena on which the observed phenomena of nature are interpreted.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[OŚL3_W01] Discusses the basic concepts of mathematics, physics, chemistry and biology. Describes physical, chemical and biological phenomena occurring in nature as well as geological, geomorphological and climatic conditions of the functioning of nature.	The student is prepared to deepen their understanding of phenomena occurring in the surrounding world and to maintain a critical attitude towards pseudoscientific information, especially that disseminated in the media	[SW1] oral statement/ conversation/discussion [SW3] text preparation/written work [SW5] implementation of a problem task
	[OŚL3_U04] Uses specialist language in the discussion and properly uses the nomenclature in the field of environmental protection and individual disciplines related to it.	The student is prepared to deepen their understanding of phenomena occurring in the surrounding world and to maintain a critical attitude towards pseudoscientific information, especially that disseminated in the media	[SU1] oral statement/conversation/ discussion [SU5] implementation of a problem task
	[OŚL3_U09] Prepares in Polish/ English a short description of research, observation or problem task carried out during classes using appropriate scientific terminology.	The student is prepared to deepen their understanding of phenomena occurring in the surrounding world and to maintain a critical attitude towards pseudoscientific information, especially that disseminated in the media	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU5] implementation of a problem task
	[OŚL3_K05] Identifies the level of her/his knowledge and skills, demonstrates the need to update knowledge about the environment and its protection, demonstrates the need for continuous professional training and personal development.	The student is prepared to deepen their understanding of phenomena occurring in the surrounding world and to maintain a critical attitude towards pseudoscientific information, especially that disseminated in the media	[SK1] oral statement/conversation/ discussion [SK3] text preparation/written work [SK5] implementation of a problem task
	[OŚL3_U11] Uses statistical methods as well as algorithms and IT techniques, including application software packages to describe environmental experiments and analysis of typical data in socio-economic activities based on science and natural sciences.	The student is prepared to deepen their understanding of phenomena occurring in the surrounding world and to maintain a critical attitude towards pseudoscientific information, especially that disseminated in the media	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work [SU5] implementation of a problem task
Subject contents	1. Basic information from mechanics (kinematics and dynamics) 2. Electromagnetic waves and their application 3. Molecular structure of bodies 4. Hydrodynamics and hydrostatics 5. Thermodynamics 6. Acoustics and optics 7. Basis of modern physics		
Prerequisites and co-requisites	Knowledge of basic mathematics and physics at the high school level.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	colloquium	51.0%	80.0%
	activity during classes	0.0%	10.0%
	solving assignments as part of homework	0.0%	10.0%
Recommended reading	Basic literature	D. Halliday i R. Resnick - Fundamentals of Physics, t.1-5.	
	Supplementary literature	Not applicable.	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Not applicable.		

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