



Subject card

Subject name and code	Physics elementary issues, PG_00040029						
Field of study	Mechanical Engineering, Mechanical Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2020/2021		
Education level	first-cycle studies	Subject group			Obligatory subject group in the field of study		
Mode of study	Part-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	general academic profile	Assessment form			assessment		
Conducting unit	Department of Physics of Electronic Phenomena -> Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Ireneusz Linert				
	Teachers		dr inż. Ireneusz Linert				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	0.0	0.0	15
	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	15		5.0		55.0	75
Subject objectives	Reviewing and consolidating knowledge of the basics of physics.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U01] is able to acquire information from specialized literary sources, databases and other resources, essential for solving engineering tasks; is able to compile the obtained information pieces and to interpret them, additionally is able to form conclusions and present justified opinion		The knowledge obtained allows independent analysis of selected issues related to physics in the surrounding reality.		[SU4] Assessment of ability to use methods and tools		
	[K6_W02] possesses an organized knowledge on physics, including classic mechanics, acoustics, optics, electricity and magnetism, shows knowledge of the elements of quantum physics		Student describes and interprets basic physical phenomena. The student conducts correct calculations and transforms on units.		[SW1] Assessment of factual knowledge		
Subject contents	EXERCISES: Motion: uniformly linear motion, resultant motion, uniformly variable motion, circular motion, two-dimension projections. Dynamics law: laws of dynamics, linear momentum, conservation of linear momentum, friction Work and energy: work, power, kinetic energy, potential energy, conservation of energy.						
Prerequisites and co-requisites	High school level physics knowledge.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Midterm colloquium		50.0%		100.0%		
Recommended reading	Basic literature		Fizyka dla szkół wyższych t.1 (Mechanika: Fale i akustyka)				
	Supplementary literature		J. Massalski, M. Massalska, Fizyka dla inżynierów, tom 1, WNT Warszawa 1979				
	eResources addresses						
Example issues/ example questions/ tasks being completed	Find a scalar and a vector product. A car travelling from city A to a city B 100 km away travels the first 40 km of the road at a speed of 80 km/h and the rest of the road at a speed of 30 km/h. Calculate the average car speed over the entire route. Graph the speed and distance versus time.						
Work placement	Not applicable						