GDAŃSK UNIVERSITY OF TECHNOLOGY

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

Adresy na platformie eNauczanie:

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