



Subject card

Subject name and code	Physics 1, PG_00041631						
Field of study	Ocean Engineering, Ocean 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	Full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	1		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department of Control and Power Engineering -> Faculty of Ocean Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Małgorzata Śmialek-Telega				
	Teachers		dr hab. inż. Małgorzata Śmialek-Telega				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	30.0	0.0	0.0	0.0	60
	E-learning hours included: 0.0						
	Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=6774 Adresy na platformie eNauczanie: Fizyka I dla studentów Specjalności Okrętowych (sem. I) - Moodle ID: 6774 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=6774						
	Additional information:						
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		10.0		30.0	100
Subject objectives	Acquisition of basic knowledge from selected branches of classical and modern physics. Gaining skills of qualitative understanding of selected principles and laws of classical and contemporary physics and quantitative analysis of selected phenomena in this field. Learning basic techniques and methods measurement of selected physical quantities						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W02] has a basic knowledge in physics, including technical mechanics, fluid mechanics, solid-state physics, optics and acoustics necessary to understand basic physical phenomena occurring in ocean technology		Has knowledge of the basics of physics in range presented on lecture; independently in writing or in an oral statement correctly and succinctly present issues discussed on content lectures these effects knowledge education; use passed and described higher knowledge for analysis selected issues about engineering character		[SW1] Assessment of factual knowledge		
	[K6_U02] can work individually and in a team, communicate through various techniques in professional environment and also record, analyse, and present the results of work, can estimate the time needed to complete a given task		Has the skills needed for individual and group work, can estimate the time needed to complete the task		[SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents							

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		50.0%	50.0%
		50.0%	50.0%
Recommended reading	Basic literature		
	Supplementary literature		
	eResources addresses	Fizyka I dla studentów Specjalności Okrętowych (sem. I) - Moodle ID: 6774 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=6774	
Example issues/ example questions/ tasks being completed	1. Give the second principle of dynamics and conclusions resulting from it 2. What are conservative and non-conservative forces; how much is the work they do; Provide examples of conservative and non-conservative forces 3. Give examples of systems moving in a harmonic way; What equation describes the harmonic motion straight?; Write and draw the dependence of the deflection from the position of the equilibrium from time; What happens if the frequency of the forcing force is close to the natural frequency of the system? 4. Draw and describe the serial connection of three capacitors with capacities C1, C2 and C3; Set dependence on equivalent capacity 5. Ohm law for the closed circuit: give the formula and explain it in the diagram with the current source and the receiver 6. Give and explain the formula for Lorentz strength. How he changes a return of strength depending on the signs of the load (draw)?		
Work placement	Not applicable		