



## Subject card

Subject name and code	Physics II, PG_00039935							
Field of study	Management and Production Engineering, Management and Production 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	2	ECTS credits			1.0			
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 hab. Tomasz Wąsowicz					
	Teachers		dr hab. Tomasz Wąsowicz					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM	
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15	
	E-learning hours included: 0.0							
	Adresy na platformie eNauczanie: Wykład FIZYKA II dla ZiIP 20/21 sem. letni - Moodle ID: 13854 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=13854">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=13854</a>							
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	2.0		8.0		25	
Subject objectives	Presentation of physical phenomena related to: elasticity, hydrostatics, hydrodynamics, thermodynamics,, electromagnetic waves, structure of matter.							
Learning outcomes	Course outcome	Subject outcome			Method of verification			
	K6_K03	Student thinks critically			[SK5] Assessment of ability to solve problems that arise in practice			
	K6_U02	Student can learn and apply the knowledge to solve engineering problems			[SU3] Assessment of ability to use knowledge gained from the subject			
	K6_W01	Student has an ability of solving the simple and complex physical problems			[SW1] Assessment of factual knowledge			
Subject contents	Electromagnetism: the movement of electrical charge through the electromagnetic field; An electric motor, electric generator; magnetism of the matter. Atom structure, Bohr model of hydrogen atom, energy levels. Spectroscopy: absorption and emission spectrum, prism and grating spectrometers. Angular momentum and spin of electron, orbitals, quantum numbers. Classification of elements: multielectron atom, Pauli's exclusion principle, periodic table of the elements. The atomic nucleus and its properties; radioactive decays. Electromagnetic waves (EW), diffraction, interference and polarization of EW, the corpuscular theory of light.							
Prerequisites and co-requisites	Course credit Physics I - E (07001W0) and Physics I (07021C0)							
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade			
	Egzam	50.0%			100.0%			
Recommended reading	Basic literature	1. Cz. Bobrowski, Fizyka, WNT, Warszawa 1979, 1993 2. J.Orear, Fizyka t. 1,2, WNT Warszawa						
	Supplementary literature	1. D.Halliday, R.Resnick, J. Walker, Podstawy fizyki t. 2,4, 5, PWN						
	eResources addresses	<a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=13854">Wykład FIZYKA II dla ZiIP 20/21 sem. letni - Moodle ID: 13854</a> <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=13854">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=13854</a>						

Example issues/ example questions/ tasks being completed	wave theory of light; Young's the double-slit experiment
Work placement	Not applicable