University of Gdańsk

Subject card

Subject name and code	Fundamentals of mediical physics I$ - quantum physics, PG_00090108						
Field of study	Medical Physics						
Date of commencement of studies	October 2024		Academic year of realisation of subject	2025/2026			
Education level	undergraduate 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	2		Language of instruction	Polish not applicable			
Semester of study	4		ECTS credits	5.0			
Learning profile	academic		Assessment form				
Conducting unit	Faculty of Mathematics, Physics and Informatics -> Rektor						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Piotr Bojarski				
	Teachers						
Lesson types	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						
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		0.0	0.0		60
Subject objectives	not applicable						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[FIZMEDL3_W09] has knowledge about the elementary components of matter and the types of fundamental interactions between them, about the manifestations of these interactions in phenomena occurring on various scales, from subatomic to astronomical, knows the time and energy scales related to these phenomena	not applicable	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
[FIZMEDL3_U07] has the ability to quantitatively analyze vibration and wave motion and describe optical and acoustic phenomena and the interaction of light with matter	not applicable	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work
[FIZMEDL3_W10] knows the basic computational methods used in classical mechanics, electrodynamics, quantum mechanics and statistical physics	not applicable	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
[FIZMEDL3_U05] can describe electric and magnetic fields in vacuum and in material media, as well as physical phenomena occurring in electric circuits; can classify material media according to the way they interact with the external electromagnetic field	not applicable	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work
[FIZMEDL3_U01] can formulate basic physical laws using mathematical formalism	not applicable	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work
[FIZMEDL3_K01] knows the limitations of his own knowledge and understands the need for further education	not applicable	[SK1] oral statement/conversation/ discussion [SK3] text preparation/written work
[FIZMEDL3_K08] can speak competently about basic problems of physics and its applications	not applicable	[SK1] oral statement/conversation/ discussion [SK3] text preparation/written work
[FIZMEDL3_K05] understands the need and importance of popularizing physical knowledge	not applicable	[SK1] oral statement/conversation/ discussion [SK3] text preparation/written work
[FIZMEDL3_W02] understands the role of physical experiment, mathematical theoretical models approximating reality and computer simulations in the methodology of scientific research; is aware of technological, apparatus and methodological limitations in scientific research	not applicable	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
[FIZMEDL3_W01] has general knowledge of basic physical concepts, principles and theories, understands their historical development and importance not only for physics, but also for science and life sciences and knowledge of the world	not applicable	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
[FIZMEDL3_U06] can use the formalism of quantum physics to describe physical phenomena in the microworld	not applicable	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work

Subject contents

not applicable

Prerequisites and co-requisites

not applicable

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
not applicable	51.0%	25.0%
not applicable	51.0%	50.0%
not applicable	51.0%	25.0%

Recommended reading

Basic literature	not applicable
Supplementary literature	not applicable
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	not applicable
Work placement	Not applicable

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