University of Gdańsk

Subject card

Subject name and code	Bachelor's Seminar, PG_00182285						
Field of study	Physics						
Date of commencement of studies	October 2025		Academic year of realisation of subject	2027/2028			
Education level	Bachelor's 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	3		Language of instruction	Polish			
Semester of study	6		ECTS credits	2.0			
Learning profile	academic		Assessment form	credit			
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Marcin Wieśniak				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	0.0	0.0	30
	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	30		0.0	20.0	50	
Subject objectives	The aim of the class is to prepare students for writing a bachelor thesis, review the knowledge gained during the first degree studies, prepare to the bachelor exam, as well as to develop skill of presentig own resuts an future research work.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[FIZL3_U10] is able to independently search for information in Polish and English-language professional and popular science literature, as well as on the Internet	A student utilizes self-aquired and verified knowledge for presentig a chosen problem.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
[FIZL3_U17] can competently express opinions and actively participate in discussions and debates on the problems of physics and its applications	Basing on their knowledge, a student is able to competently present basic. problems and theories of modern physics, accept arguments deepening their own point of view and critically verify those contradicting the current state of knowledge. A student is aware of reasoning that led to formulating physical theories. A student understands the role of physical theories in everyday phenomena	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
[FIZL3_U13] is able to present the latest achievements in physics in an accessible way	A student is able to prepare a presentation on a chosen topic and take a part in discussions on physics.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
[FIZL3_W01] has advanced knowledge of physical concepts, principles and theories, understands their historical development and significance not only for physics, but also for other exact and natural sciences and cognition of the world	A student is able to refere to experimental results that led to formulating individual physical theories. A student understand basics of modern technologies.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
[FIZL3_K01] knows the limitations of their own knowledge and understands the need for further education	A student is able to point physical situations, when models introduced to them are insufficient. By being introduced to the role of experiments in developments of physics and following contemporary scientific reports, the student is ready to verify their own knowledge and opinions.	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report
[FIZL3_U16] can independently plan and implement his/her own learning	By systematic work and participation in presentations a student perpetuates the knowledge required at the exam.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report

Subject contents

An overview of chosen physical problems in form of presentations prepared by students and discussed by the group. A debate on a one chosen problem in physics. Specific topics will be agreed with a student preparing a presentation. A list of topics will include those from the following fields:

Classical Mechanics

Thermodynamics

Electromagetism and Electrodynamics

Particle, Nuclear, and Atomic Physics

Astronomy and Astrophysics

Quantum Mechanics

Solid State Physics

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Presentation/Discussion	51.0%	100.0%

Recommended reading	Basic literature	David Halliday, Jearl Walker, Robert Resnick, Podstawy fizyki Tom 1-5, PWN A. Kalestyński, L. Widomski, M.A. Herman, Podstawy fizyki dla kandydatów na wyższe uczelnie i studentów, PWN
	Supplementary literature	Feynman Richard P. Leighton Robert Sands Matthew, Feynmana wykłady z fizyki. Tom 1-3, PWN
	eResources addresses	
Example issues/ example questions/ tasks being completed	Deterministic Chaos Centripetal force Radioactivity and Decays Phonons Principles of Spectroscopy Solar Wind	
Work placement	Not applicable	

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