University of Gdańsk

Subject card

Subject name and code	Specialist Laboratory, PG_00182305						
Field of study	Physics						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Optional subject group Subject group related to scientific research 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		
Semester of study	4		ECTS credits		5.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Faculty of Mathematics, Physics and Informatics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Ryszard Drozdowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	75.0	0.0	0.0	75
	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	75		0.0		50.0	125
Subject objectives	Preparing students to conduct independent research. Introducing students to the use of research methods, tools, and procedures used in the creation and presentation of scientific results.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[FIZL3_U13] is able to present the latest achievements in physics in an accessible way	The student is able to: - use multimedia presentation software, such as PowerPoint, - prepare a presentation based on generally known physical phenomena - use available experiments	[SU2] presentation/project/paper/ report
[FIZL3_U16] can independently plan and implement his/her own learning	The student is able to: - prepare a plan to solve a given problem - gather knowledge acquired during studies - review the literature on the given problem	[SU3] text preparation/written work
[FIZL3_K01] knows the limitations of their own knowledge and understands the need for further education	The student is aware of: – the need for further education for themselves and others, – responsibility for jointly implemented tasks, – the importance of intellectual honesty in their own actions and those of others; – ethical issues in the context of research integrity, – the need to formulate informed opinions on professional matters and on issues of public concern, – the need to think and act in an entrepreneurial manner, – the need to popularize knowledge of physics, – the risks associated with obtaining information from unverified sources, including the Internet.	[SK5] implementation of a problem task
[FIZL3_K05] understands the need and importance of popularizing physical knowledge	The student is aware that the popularization of knowledge has a positive impact on: - introducing innovations in everyday life - the economic development of the country - increasing public awareness of the rights of nature	[SK1] oral statement/conversation/ discussion
[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	The student is able to: – plan and conduct advanced experiments, – formulate questions precisely, – critically analyze the results of measurements, observations, or theoretical calculations, and assess the accuracy of the results, – apply the scientific method to gather knowledge, – locate necessary information in the professional literature, both in databases and other sources, – reproduce the reasoning or course of an experiment described in the literature, taking into account the assumptions and approximations made, – use methods and ideas from various areas of physics and other exact and natural sciences, – recognize that distant phenomena are often described by similar models, – work individually and in a team.	[SU5] implementation of a problem task

Subject contents

The student learns about the conditions and principles of occupational health and safety in a research laboratory equipped with advanced research equipment and/or computers, learns about measurement equipment and available software, prepares and adjusts measurement equipment and/or generates codes necessary to carry out research work, performs measurements and/or numerical calculations, and processes measurement results.

Prerequisites and co-requisites

not applicable

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
average partial grades	51.0%	100.0%

Recommended reading

Basic literature	Appropriate for the subject matter of a specialist workshop.

	Supplementary literature	Appropriate for the subject matter of a specialist workshop.
	eResources addresses	
Example issues/ example questions/ tasks being completed	not applicable	
Work placement	Not applicable	

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