

**Subject card**

<b>Subject name and code</b>	Undergraduate Diploma Seminar, PG_00146058						
<b>Field of study</b>	Physics						
<b>Date of commencement of studies</b>	October 2024	<b>Academic year of realisation of subject</b>			2026/2027		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Optional subject group		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	3	<b>Language of instruction</b>			Polish not applicable		
<b>Semester of study</b>	6	<b>ECTS credits</b>			2.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>	Faculty of Mathematics, Physics and Informatics -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr hab. Ryszard Drozdowski				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	0.0	0.0	0.0	0.0	30.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	30		0.0		30.0	60
<b>Subject objectives</b>	not applicable						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[FIZL3_U01] can formulate basic physical laws using mathematical formalism	not applicable	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU8] observation of student's independent or team work
	[FIZL3_W16] knows and understands the basic concepts and principles of industrial property protection and copyright law, and the principles of using patent information resources	not applicable	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report [SW5] implementation of a problem task
	[FIZL3_K03] is aware of and understands the social aspects of the practical application of acquired knowledge and skills and the associated responsibility	not applicable	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report [SK8] observation of student's independent or team work
	[FIZL3_U15] is able to work in a team, plan and organize his own work and that of the team	not applicable	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU8] observation of student's independent or team work
	[FIZL3_K02] can precisely formulate problems to deepen understanding of a given topic	not applicable	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report [SK8] observation of student's independent or team work
	[FIZL3_K07] has a sense of responsibility for jointly implemented tasks; is able to interact and work in a group, assuming different roles in it	not applicable	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report [SK8] observation of student's independent or team work
	[FIZL3_K08] is able to speak competently on basic problems of physics and its applications	not applicable	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report [SK8] observation of student's independent or team work
	[FIZL3_U13] is able to present the latest developments in physics in an accessible way	not applicable	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU8] observation of student's independent or team work
	[FIZL3_U14] is able to use English in the fields of physics, mathematics and computer science in accordance with the requirements specified for level B2 of the Common European Framework of Reference for Languages	not applicable	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU8] observation of student's independent or team work
	[FIZL3_K05] understands the need and importance of popularizing physical knowledge	not applicable	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report [SK8] observation of student's independent or team work
	[FIZL3_K04] understands and appreciates the importance of legal aspects of conducting research and intellectual honesty	not applicable	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report [SK8] observation of student's independent or team work
	[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	not applicable	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report [SW5] implementation of a problem task

	Course outcome	Subject outcome	Method of verification
	[FIZL3_W15] has a basic knowledge of the legal and ethical considerations involved in scientific and teaching activities	not applicable	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW5] implementation of a problem task
	[FIZL3_K06] is aware of professionalism and adherence to professional ethics	not applicable	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report [SK8] observation of student's independent or team work
	[FIZL3_U10] can independently search for information in Polish and English-language professional and popular science literature, as well as on the Internet	not applicable	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU8] observation of student's independent or team work
	[FIZL3_K01] knows the limitations of his own knowledge and understands the need for further education	not applicable	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report [SK8] observation of student's independent or team work
	[FIZL3_U16] can independently plan and implement his own learning	not applicable	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU8] observation of student's independent or team 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%	80.0%
	not applicable	0.0%	20.0%
Recommended reading	Basic literature	not applicable	
	Supplementary literature	not applicable	
	eResources addresses		
Example issues/ example questions/ tasks being completed	not applicable		
Work placement	Not applicable		

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