

Subject card

Subject name and code	Elements of automation of measurements, PG_00153887						
Field of study	Physics						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2025/2026		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Optional subject group		
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	3		ECTS credits		2.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Faculty of Mathematics, Physics and Informatics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Krzysztof Dorywalski				
	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		25.0	55
Subject objectives	not applicable						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[FIZL3_W13] knows basic measuring instruments, their construction and principle of operation, and applications of simple electronic circuits	not applicable	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report [SW5] implementation of a problem task
	[FIZL3_W12] knows the basics of numerical analysis, knows at a basic level at least one package for symbolic calculations, knows basic application software packages for presentation of results and data analysis; knows the basics of programming and software engineering	not applicable	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report [SW5] implementation of a problem task
	[FIZL3_W14] knows the basic principles of ergonomics and occupational health and safety	not applicable	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report [SW5] implementation of a problem task
	[FIZL3_W03] knows how to plan and perform a simple physical experiment and analyze the results obtained; knows the elements of the theory of measurement uncertainty as applied to physical experiments, knows the basic units of the SI system and its most important derived units; knows other systems of measurement units	not applicable	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report [SW5] implementation of a problem task
	[FIZL3_K08] is able to speak competently on basic problems of physics and its applications	not applicable	[SK2] presentation/project/paper/report [SK4] test/exam - oral or written [SK5] implementation of a problem task
	[FIZL3_K02] can precisely formulate problems to deepen understanding of a given topic	not applicable	[SK2] presentation/project/paper/report [SK4] test/exam - oral or written [SK5] implementation of a problem task
	[FIZL3_K01] knows the limitations of his own knowledge and understands the need for further education	not applicable	[SK2] presentation/project/paper/report [SK4] test/exam - oral or written [SK5] implementation of a problem task
	[FIZL3_U16] can independently plan and implement his own learning	not applicable	[SU2] presentation/project/paper/report [SU5] implementation of a problem task [SU6] demonstration of practical skills
	[FIZL3_U12] can compile, run, test and document a self-written computer program	not applicable	[SU2] presentation/project/paper/report [SU5] implementation of a problem task [SU6] demonstration of practical skills
	[FIZL3_U11] is able to use basic application software packages for presentation of results and data analysis	not applicable	[SU2] presentation/project/paper/report [SU5] implementation of a problem task [SU6] demonstration of practical skills
Subject contents	not applicable		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		0.0%	10.0%
		51.0%	10.0%
	not applicable	0.0%	80.0%
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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