

**Subject card**

<b>Subject name and code</b>	Analysis of Experimental Data , PG_00204790						
<b>Field of study</b>	Nuclear safety and radiological protection						
<b>Date of commencement of studies</b>	October 2026	<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	
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>				at the university	
<b>Year of study</b>	1	<b>Language of instruction</b>				Polish	
<b>Semester of study</b>	1	<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 Justyna Barzowska				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	15.0	0.0	15.0	0.0	0.0	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
	[BJORL3_U06] Is able to use basic application software packages for presentation of results and data analysis.	not applicable	[SU1] oral statement/conversation/discussion [SU3] text preparation/written work
	[BJORL3_U04] Can use mathematical and computer apparatus to analyze and solve problems in radiological protection and nuclear safety.	not applicable	[SU1] oral statement/conversation/discussion [SU3] text preparation/written work
	[BJORL3_U02] Has the ability to perform measurements of basic quantities used in physics and chemistry; can develop, describe and present the results of simple experiments and computer simulations; can perform quantitative analyses and formulate qualitative conclusions on this basis; can estimate measurement uncertainties.	not applicable	[SU1] oral statement/conversation/discussion [SU3] text preparation/written work
	[BJORL3_W03] Knows how to plan and perform a simple physical or chemical experiment and analyze the results obtained; knows the elements of the theory of measurement uncertainty as applied to experiments; knows the basic units of the SI system and its most important derived units; knows other systems of measurement units.	not applicable	[SW1] oral statement/conversation/discussion [SW3] text preparation/written work
[BJORL3_W02] Understands the role of physical and chemical experimentation, mathematical theoretical models approximating reality, and computer simulations in scientific research methodology; is aware of technological, apparatus, and methodological limitations in scientific research.	not applicable	[SW1] oral statement/conversation/discussion [SW3] text preparation/written work	
Subject contents	<ol style="list-style-type: none"> <li>1. Basic concepts concept of measurement, direct and indirect measurements, representation of measurement uncertainties, and rounding of results.</li> <li>2. Mean value and standard (statistical) uncertainty (deviation) of a series of direct measurements.</li> <li>3. Mean value of a series of independent and dependent indirect measurements.</li> <li>4. Evaluation of the maximum uncertainty in indirect measurements using the total differential method.</li> <li>5. Combined standard uncertainty of a series of independent and dependent indirect measurements.</li> <li>6. Evaluation of uncertainty in cases where random and systematic uncertainties are comparable.</li> <li>7. Graphical representation of experimental data, selection of scale and units, presentation of measurement errors on graphs, and interpretation of relationships between physical quantities.</li> <li>8. Linear regression method fitting a linear function to experimental results.</li> </ol>		
Prerequisites and co-requisites	not applicable		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	not applicable	0.0%	10.0%
	not applicable	51.0%	30.0%
	not applicable	51.0%	60.0%
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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