



## Subject card

Subject name and code	Planning and analysis of experiment, PG_00020714						
Field of study	Technical Physics						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2021/2022		
Education level	first-cycle studies	Subject group			Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			blended-learning		
Year of study	1	Language of instruction			Polish		
Semester of study	1	ECTS credits			4.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Atomic, Molecular and Optical Physics -> Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Paweł Możejko				
	Teachers		dr hab. Paweł Możejko				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	15.0	0.0	0.0	0.0	30
	E-learning hours included: 15.0 Adresy na platformie eNauczenie:						
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	5.0		65.0	100	
Subject objectives	The aim of the course is to present the measurements procedures of physical quantities and the analysis of statistical and systematic uncertainties.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_W08	Ability to calculate the experimental errors in indirect measurements.			[SW1] Assessment of factual knowledge		
	K6_U04	Practical knowledge of statistical distributions and their application in the error analysis.			[SU4] Assessment of ability to use methods and tools		



<p>Example issues/ example questions/ tasks being completed</p>	<ol style="list-style-type: none"> <li>1) Calculation of the arithmetic mean, standard deviation and standard deviation of the mean</li> <li>2) Graphical presentation of the measured data</li> <li>3) Calculation of measurement error using the combined standard uncertainty method</li> <li>4) Calculation of weighted average</li> <li>5) The analysis of statistical data with the normal distribution</li> <li>6) Linear function fit to the measured data</li> <li>7) Calculation of the linear regression coefficient and its analysis</li> <li>8) Implementation of simple measurements using a calliper and a micrometer</li> </ol>
<p>Work placement</p>	<p>Not applicable</p>