

**Subject card**

<b>Subject name and code</b>	Introduction to the methodology of experimental research, PG_00198282						
<b>Field of study</b>	Genetics and Experimental Biology						
<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 Biology -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Monika Maciąg-Dorszyńska				
	<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	30.0	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		4.0		16.0	50
<b>Subject objectives</b>	Understanding the basis of planning and conducting experiments with emphasis on control of the experimental system						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[GBEL3_W09] A graduate has an advanced knowledge and understanding of: principles of occupational health and safety and ergonomics.	Student determines basic principles of safety, hygiene, and ergonomics at work	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
	[GBEL3_W05] A graduate has an advanced knowledge and understanding of: principles for planning research based on the achievements of biological sciences and related disciplines and the possibility of putting their results into practice, principles for the operation of equipment and apparatus used in molecular genetics research, and the principle of interpreting biological phenomena and processes based on empirical data in research work and practical action, taking into account the sustainable use of biodiversity.	Student knows the principles of planning research based on achievements in biological sciences and related fields, and the possibility of using their results in practice, as well as the principles of functioning of equipment and apparatus used in molecular genetics research	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW5] implementation of a problem task
	[GBEL3_U03] The graduate is able to: use research apparatus and tools and, following the correct sequence of operations, carry out simple physical, biological or chemical observations and measurements in laboratory work in the biological sciences.	Student uses basic research equipment and tools and, while maintaining the correct sequence of actions, performs simple physical, biological or chemical observations and measurements in laboratory work in the field of biological sciences	[SU6] demonstration of practical skills [SU7] entries and opinions in the internship diary
	[GBEL3_K08] The graduate is prepared to: takes responsibility for equipment/materials entrusted to it and respects the work of others.	Student is responsible for the entrusted equipment/materials, his/her own work and respects the work of others	[SK8] observation of student's independent or team work
[GBEL3_U01] The graduate is able to: independently perform practical tasks in the biological and related sciences, formulate research problems, analyse their results and draw conclusions.	Student independently performs practical tasks in the field of biological and related sciences, formulates research problems, analyzes their results, and draws conclusions.	[SU6] demonstration of practical skills [SU8] observation of student's independent or team work	
Subject contents	<ul style="list-style-type: none"> <li>- laboratory safety</li> <li>- basic laboratory tasks: preparing buffers, using an automatic pipette, operating a pH meter, sterile work</li> <li>- planning experiments: controlling the experimental setup, pilot experiments, positive and negative controls, difference between hypothesis and research model</li> <li>- conducting simple experiments illustrating the program content and writing a report</li> </ul>		
Prerequisites and co-requisites	none		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		50.0%	50.0%
		50.0%	50.0%
Recommended reading	Basic literature	Kathy Barker, At the bench: a laboratory navigator, Cold Spring Harbor Laboratory Press, 2004	
	Supplementary literature	Kathy Barker, At the bench: a laboratory navigator, Cold Spring Harbor Laboratory Press, 2004	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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