

Subject card

Subject name and code	Specialization laboratory III, PG_00118844						
Field of study	Pracownia specjalnościowa III						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Optional subject group Specialty subject group Subject group related to scientific research in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	3		ECTS credits		13.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Medical Biology and Genetics -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Anna Herman-Antosiewicz				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	150.0	0.0	0.0	150
	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	150		50.0		125.0	325
Subject objectives	Acquiring the ability to use research techniques in scientific work; planning and conducting experiments in the laboratory or collecting materials in the field, recording and interpreting data; describing the goals and assumptions of the research project, analyzing the results of the conducted experiments and their discussions.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDMU2_W06] knows the basic ethical and legal considerations related to scientific, teaching and implementation activities	Knows the basic ethical and legal conditions related to scientific, teaching and implementation activities	[SW1] wypowiedź ustna/rozmowa/ dyskusja [SW2] prezentacja/projekt/referat/ raport
	[BIOLMEDMU2_W05] knows the principles of practice based on scientific arguments	Knows the principles of practice based on scientific arguments	[SW1] wypowiedź ustna/rozmowa/ dyskusja [SW2] prezentacja/projekt/referat/ raport
	[BIOLMEDMU2_W04] knows the principles of planning research based on the achievements of biological and medical sciences, the principles of operation of equipment and apparatus used in medical biology research, and the principle of interpreting biological phenomena and processes based on empirical data in research work and practical activities	Knows the principles of research planning based on the achievements of biological and medical sciences, the principles of operation of equipment and apparatus used in medical biology research and the principle of interpreting phenomena and processes of biological sciences based on empirical data in research and practical activities	[SW1] wypowiedź ustna/rozmowa/ dyskusja [SW2] prezentacja/projekt/referat/ raport
	[BIOLMEDMU2_U07] is able to show initiative and lead teamwork and cooperate in the planning and implementation of research tasks	Can show initiative and cooperate in planning and implementing research tasks in a team	[SU5] realizacja zadania problemowego [SU8] obserwacja samodzielnej lub zespołowej pracy studenta
	[BIOLMEDMU2_U06] knows and applies English-language specialized vocabulary of biological and medical sciences in daily professional/scientific activities	Knows and uses English-language specialist vocabulary in the field of biological and medical sciences in everyday professional/scientific activities	[SU1] wypowiedź ustna/rozmowa/ dyskusja [SU2] prezentacja/projekt/referat/ raport [SU8] obserwacja samodzielnej lub zespołowej pracy studenta
	[BIOLMEDMU2_K02] is ready to recognize the importance of knowledge in solving cognitive and practical problems and to seek expert advice when having difficulty solving a problem on his own	Recognizes the importance of knowledge in solving cognitive and practical problems and seeks the opinion of experts in case of difficulties in solving the problem independently	[SK1] wypowiedź ustna/rozmowa/ dyskusja [SK8] obserwacja samodzielnej lub zespołowej pracy studenta
	[BIOLMEDMU2_U08] can independently plan and implement his own lifelong learning and guide others in doing so	Can independently plan and implement his lifelong learning and guide others in this area	[SU1] wypowiedź ustna/rozmowa/ dyskusja [SU8] obserwacja samodzielnej lub zespołowej pracy studenta
	[BIOLMEDMU2_U02] is able to plan and conduct experiments and measurements based on advanced research techniques and tools, is able to interpret the obtained results and draw conclusions	Can plan and carry out experiments and measurements based on advanced techniques and research tools, can interpret the obtained results and draw conclusions	[SU1] wypowiedź ustna/rozmowa/ dyskusja [SU2] prezentacja/projekt/referat/ raport [SU5] realizacja zadania problemowego [SU8] obserwacja samodzielnej lub zespołowej pracy studenta
	[BIOLMEDMU2_U03] is able to formulate and solve problems on the basis of the known laws and methods, including - using computer tools and statistical methods	Is able to formulate and solve problems based on known laws and methods, including using IT tools and statistical methods	[SU1] wypowiedź ustna/rozmowa/ dyskusja [SU2] prezentacja/projekt/referat/ raport [SU5] realizacja zadania problemowego [SU8] obserwacja samodzielnej lub zespołowej pracy studenta
	[BIOLMEDMU2_U04] is able to identify errors and omissions in practice	Can identify errors and omissions in practice	[SU1] wypowiedź ustna/rozmowa/ dyskusja [SU2] prezentacja/projekt/referat/ raport [SU8] obserwacja samodzielnej lub zespołowej pracy studenta
	[BIOLMEDMU2_K04] takes care of his own safety, the safety of his surroundings and co-workers of certain tasks	Cares about his/her own, surroundings and coworkers' safety	[SK8] obserwacja samodzielnej lub zespołowej pracy studenta
Subject contents	The content is related to the master's thesis topic and is individually selected. It addresses the issues and methodology of research conducted at the department		
Prerequisites and co-requisites			

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	The basis for grading is the completion of a final project: conducting research and properly processing the results (in the form of a report). Laboratory work (the student's systematic approach and commitment to the research) is also assessed.	51.0%	100.0%
Recommended reading	Basic literature	The literature is selected individually depending on the topic of the work and takes into account the scientific achievements of the supervisor and the team with which the student cooperates.	
	Supplementary literature	Additional literature is independently searched by the student in literature databases (including PubMed, BIOSIS, Science Direct, Scirrus).	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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