



Subject card

Subject name and code	Diploma laboratory I, PG_00066090						
Field of study	Chemistry						
Date of commencement of studies	February 2026		Academic year of realisation of subject		2026/2027		
Education level	second-cycle studies		Subject group		Optional 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	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Pharmaceutical Technology and Biochemistry -> Faculty of Chemistry -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Julia Borzyszkowska-Bukowska				
	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		5.0		15.0	50
Subject objectives	The aim of the course is to prepare students to independently plan, carry out and document experimental research, and to analyse and present research findings, drawing on their knowledge of research methods, data analysis and methods of chemical synthesis, in the context of their Master's thesis.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_U05] analyzes the functioning of devices, equipment and technological lines used in laboratories and the chemical industry		Is able to analyze the operation of laboratory equipment and instruments and select appropriate operating parameters for the experimental work being conducted.		[SU4] Assessment of ability to use methods and tools		
	[K7_U02] prepares detailed documentation of the results of independently conducted experiments and analyzes the obtained results, uses professional vocabulary with understanding and prepares and communicates information		Is able to prepare comprehensive documentation of independently conducted experimental work and analyze and interpret the obtained analytical data using appropriate scientific terminology and the standards of scientific reporting.		[SU2] Assessment of ability to analyse information		
	[K7_U04] develops and transmits technical information in the form of text documents, spreadsheets, graphs, technological diagrams and multimedia presentations, and prepares a speech including a multimedia presentation		Is able to prepare complete and formally correct documentation of research results obtained during the Master's thesis project, and to prepare and deliver a presentation describing the research objectives, methodology, results, and conclusions.		[SU5] Assessment of ability to present the results of task		
	[K7_W04] indicates methods for the synthesis of chemical compounds with defined properties		Knows and understands the methods for the synthesis of chemical compounds with defined properties and the criteria for their selection in the context of research carried out as part of the Master's thesis.		[SW3] Assessment of knowledge contained in written work and projects		

Subject contents	Course content – laboratory Planning and organization of research related to the Master's thesis. Selection of appropriate research methods and experimental techniques. Preparation of the experimental setup and operation of specialized laboratory equipment. Performance of experiments according to the adopted methodology. Documentation of experimental work and processing of research results. Analysis and interpretation of experimental data using appropriate analytical and statistical methods. Critical evaluation of the obtained results and identification of sources of measurement uncertainty. Preparation of materials for the Master's thesis and presentation of research findings.		
Prerequisites and co-requisites	Knowledge and skills in chemistry and research methods relevant to the Master's thesis topic. The scope of prior preparation is determined individually in consultation with the Master's thesis supervisor.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Assessment of the presentation of research results and discussion of the obtained findings	60.0%	30.0%
	Assessment of the execution and documentation of experimental research conducted as part of the Master's thesis	60.0%	70.0%
Recommended reading	Basic literature	1. Specialist literature recommended by the Master's thesis supervisor, relevant to the research topic. 2. Current peer-reviewed scientific publications related to the Master's thesis topic. 3. Operating manuals for research equipment and laboratory procedures used in the research unit. 4. Guidelines for the preparation of Master's theses at Gdańsk University of Technology.	
	Supplementary literature	Additional materials recommended by the Master's thesis supervisor.	
	eResources addresses		
Example issues/ example questions/ tasks being completed	• Development of an experimental research plan consistent with the Master's thesis topic. • Selection of appropriate research methods and laboratory equipment for the planned experiments. • Performance of laboratory experiments in accordance with the adopted methodology and safety regulations. • Processing, analysis, and interpretation of experimental results. • Preparation of research documentation for the Master's thesis. • Preparation and presentation of research progress and research findings.		
Practical activities within the subject	Not applicable		

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