



Subject card

Subject name and code	Engineer Diploma Laboratory, PG_00054734						
Field of study	Biotechnology						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2026/2027		
Education level	first-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	4		Language of instruction		Polish		
Semester of study	7		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Biotechnology and Microbiology -> Faculty of Chemistry -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Anna Brillowska-Dąbrowska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	60.0	0.0	0.0	60
	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	60		5.0		10.0	75
Subject objectives	The aim of the <i>Diploma Laboratory</i> course is to prepare students to independently carry out research or design tasks related to the subject of their diploma thesis, including planning and conducting experiments, analysing and interpreting the results obtained, and drawing conclusions. The course aims to develop skills in the practical application of engineering knowledge, teamwork and individual work, as well as to develop competences in documenting and presenting the results of a diploma project.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U82] is able to obtain and process information related to field of study and academic environment in foreign language at B2 level of the Common European Framework of Reference for Languages (CEFR)		The student is able to independently search for and analyse scientific literature and source materials in a foreign language on issues related to the diploma thesis, and then use them in the theoretical part and in the presentation of research results.		[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject		
	K6_U02		The student is able to apply knowledge of general, physical and quantum chemistry to interpret the properties of biomolecules.		[SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment		
	K6_U10		The student is able to plan and conduct laboratory experiments or trials using knowledge in the field of machine science, technology or bioprocess engineering in order to implement the objectives of a diploma project.		[SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment		

Subject contents	Course content – laboratory 1. Introduction to thesis work discussion of the rules, schedule and requirements for engineering work. 2. Selection and analysis of literature on the subject searching for sources, including in foreign languages; preparation of a theoretical review. 3. Research/experiment design formulation of objectives, hypotheses and research methods. 4. Preparation of the research station and equipment safety rules, operation of devices, development of an experiment plan. 5. Conducting laboratory or design research conducting experiments, documenting results. 6. Analysis and interpretation of results data processing, performing calculations. 7. Formulating conclusions critically evaluating results and relating them to the literature. 8. Preparing part of the thesis preparing partial reports, editing chapters of the thesis.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Implementation of research/ project tasks	60.0%	50.0%
	Analysis and interpretation of results	60.0%	50.0%
Recommended reading	Basic literature	Monographs, scientific articles and other literature sources indicated by the thesis supervisor, consistent with the subject matter of the project.	
	Supplementary literature	Collected independently by the student writing the thesis, in accordance with the subject scope of the project and the supervisor's guidelines.	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Establishing preliminary PCR reaction conditions and optimizing the reaction parameters.		
Practical activities within the subject	Not applicable		

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