GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Laboratory Practice, PG_00060835		
Field of study	Chemical Technology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	first-cycle studies	Subject group	Obligatory subject group 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	1	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Inorganic Chemistry -> Faculty of Chemistry -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Andrzej Okuniewski	
	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	3.0	17.0	50

Subject objectives

The aim of the course is to familiarise students with basic laboratory equipment and work techniques used in chemical laboratories - especially in the field of inorganic, physical and organic chemistry.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U02] Performs design calculations of technological processes, selects industrial equipment, operates laboratory equipment and conducts material analyses	The student is able to use basic laboratory equipment, among others, to prepare solutions, perform distillation and crystallization, as well as perform qualitative and quantitative analysis. Is able to measure the pH and temperature of a solution, perform basic calculations, balance chemical reactions and collect the results in the form of a report.	[SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task
[K6_K02] is aware of the responsibility for his/her work and is ready to work in a team and share responsibility for common tasks.	The student feels comfortable working in small teams whose members jointly perform experiments, analyze results, and prepare reports.	[SK1] Assessment of group work skills [SK5] Assessment of ability to solve problems that arise in practice

Subject contents

Course content – laboratory
Laboratory classes are held in three departments and include:

Department of Inorganic Chemistry: Basic laboratory tasks. Solution pH. Redox reactions. Qualitative analysis of selected metal cations.

Department of Physical Chemistry: Solution preparation. Volumetry, titration. Temperature measurement, elements of electrochemistry.

Department of Organic Chemistry: Distillation. Extraction. Crystallization.

Prerequisites and co-requisites

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>DOCh laboratory</td><td>60.0%</td><td>33.0%</td></tr>
<tr><td>DPCh laboratory</td><td>60.0%</td><td>33.0%</td></tr>
<tr><td>DICh laboratory</td><td>60.0%</td><td>34.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>Materials available on the eNauczanie platform.

A. Okuniewski, A. Mietlarek-Kropidłowska: Techniki laboratoryjne. Materiał obowiązujący na zajęciach realizowanych w Katedrze Chemii Nieorganicznej.

K. Dzierzbicka, G. Cholewiński, J. Rachoń: Tajemnice i sekrety laboratorium chemii organicznej, Wyd. PG.</td></tr>
<tr><td>Supplementary literature</td><td>N. Bellen, A. Gutorska: Poradnik laboranta chemika. WNT, Warszawa 1985.

A. I. Vogel: Preparatyka Organiczna, WNT, Warszawa 2006.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">Sample questions can be found in the materials available on the eNauczanie platform.</td></tr>
<tr><td>Practical activites within the subject</td><td colspan="2">Not applicable</td></tr>
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