University of Gdańsk

Subject card

Subject name and code	Don't be afraid to teach others, PG_00180086		
Field of study	Chemistry		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
Education level	Bachelor's studies	Subject group	Optional subject group
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	3.0
Learning profile	academic	Assessment form	credit
Conducting unit	Division of Didactics and Popular Science -> Faculty of Chemistry -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Aleksandra Zahorska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	45.0	0.0	0.0	0.0	45

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	45	15.0	30.0	90

Subject objectives

The aim of the course is to familiarize students with modern methods of teaching and learning in chemistry education and their practical application.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[CHEML3_W11] Defines the basic principles of occupational health and safety and ergonomics necessary for the proper organization of learning.	The student knows how to create safe and hygienic learning conditions for themselves and others. The student is familiar with the principles of ergonomics when working with a computer.	[SW5] implementation of a problem task
[CHEML3_U09] Is able to learn independently.	The student is able to use 3D printing, gamification, and AI tools for self-directed learning.	[SU2] presentation/project/paper/ report
[CHEML3_K07] Appreciates the need for understandable presentation of selected chemical issues to the public.	The student recognizes the need to communicate chemical concepts clearly and accessibly to primary and/or secondary school students as well as to peers.	[SK1] oral statement/conversation/ discussion
[CHEML3_U08] Presents in an understandable way the basic facts about chemistry using a scientific language typical of chemical sciences.	The student is able to explain chemical concepts to others in an accessible way or to create teaching aids/educational tools related to chemistry education.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report

Subject contents

The course content relates to three thematic blocks connected with a modern approach to teaching and learning chemistry: 3D printing, gamification, and AI tools.

Prerequisites and co-requisites

Basic computer skills and successful completion of the courses 'Inorganic Chemistry' and 'Organic Chemistry' are required.

<table>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Project from the '3D Printing' module</td><td>51.0%</td><td>33.33%</td></tr>
<tr><td>Project from the 'Gamification' module</td><td>51.0%</td><td>33.33%</td></tr>
<tr><td>Project from the 'AI Tools' module</td><td>51.0%</td><td>33.34%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">"Architektura wiedzy w szkole", 2013, Stanisław Dylak</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">"Konstruowanie wiedzy w szkole", 2002, Dorota Klus-Stańska</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">Operating a 3D printer in chemistry teaching or learning, creating educational games, and using AI tools for chemistry education.</td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
</table>

Document generated electronically. Does not require a seal or signature.