University of Gdańsk

Subject card

Subject name and code	Monographic lecture - Chemistry of non-aqueous solutions, PG_00080866		
Field of study	Chemistry		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
Education level	Master's studies	Subject group	Obligatory subject group in the field of study Optional subject group
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish Polish
Semester of study	4	ECTS credits	3.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Physicochemistry of Coordination Complexes -> Department of General and Inorganic Chemistry -> Faculty of Chemistry -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Dariusz Wyrzykowski	
	Teachers	dr hab. Dariusz Wyrzykowski dr hab. Joanna Makowska	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	0.0	0.0	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	40.0	75

Subject objectives

familiarisation with the issues mentioned in the programme content,

introduction of the basics of methods for the experimental determination of equilibrium constants in solutions,

developing the ability to select an appropriate experimental method for the thermodynamic description of a solution.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[CHEMMU2_W01] Uses knowledge of spectroscopic methods of chemical compound analysis.	He uses in-depth knowledge of spectroscopic methods of analyzing chemical compounds.	[SW4] test/exam - oral or written
[CHEMMU2_K01] Knows the limitations of her/his own knowledge; understands the need for further education and can inspire other people to do so.	He knows the limits of his own knowledge, understands the need for further education and is able to inspire other people to do so.	[SK4] test/exam - oral or written
[CHEMMU2_W05] Has extended knowledge in the field of the specialisation studied.	Uses in-depth knowledge in the field of the studied specialty.	[SW4] test/exam - oral or written
[CHEMMU2_W11] Demonstrates general knowledge about the current trends in the development of chemistry as a science and the latest discoveries in this field.	Demonstrates in-depth knowledge of the current directions of development of chemistry as a science and the latest discoveries in this field.	[SW4] test/exam - oral or written

<table>
<tr><td>Subject contents</td><td>Non-aqueous environments; acid-base interactions in non-aqueous environments; theories of acids and bases; the role of the solvent; systems of
classification of non-aqueous environments; binary systems of mixed solvents; synthesis reactions and electrode processes in non-aqueous environments
non-aqueous environments; overview of non-aqueous environments; acid-base titrations in non-aqueous environments; hydrogen bonding; equilibrium
proton transfer; potentiometry in non-aqueous media; potentiometric method for determining equilibrium constants in
solutions; conductivity equations; methods of determining association constants and limiting equivalent conductivities from
conductivity equations</td></tr>
<tr><td>Prerequisites
and co-requisites</td><td></td></tr>
<tr><td>Assessment methods
and criteria</td><td><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td></td><td>51.0%</td><td>100.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>brak</td></tr>
<tr><td>Supplementary literature</td><td>brak</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/
example questions/
tasks being completed</td><td>brak</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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