University of Gdańsk

Subject card

Subject name and code	Monographic lecture - Chemistry of non-aqueous solutions, PG_00080866		
Field of study	Chemical Business		
Date of commencement of studies	February 2025	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	3	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		

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

introduction to 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.

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<tr><td>Learning outcomes</td><td>
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<tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr>
<tr><td>[BCHMU2_W01] Knows and understands complex physicochemical processes and is able to analyse their course in connection with other fields of science.</td><td>Knows and understands in-depth complex physicochemical processes and is able to analyze their course in connection with other fields of science.</td><td>[SW4] test/exam - oral or written</td></tr>
<tr><td>[BCHMU2_U01] Is able to, on the basis of her/his knowledge, propose a solution to problems in chemistry, taking into account the economic aspect by using advanced measurement techniques.</td><td>He can, based on his knowledge, propose solutions to chemistry problems, taking into account the economic aspect, using advanced measurement and analytical techniques.</td><td>[SU4] test/exam - oral or written</td></tr>
<tr><td>[BCHMU2_W05] Knows and understands the main trends in the development of chemistry combined with economics as two interpenetrating scientific disciplines.</td><td>Knows and understands the main directions of development of chemistry combined with economics as two intertwining scientific disciplines.</td><td>[SW4] test/exam - oral or written</td></tr>
<tr><td>[BCHMU2_K04] Is willing to properly assess the acquired knowledge, respect and disseminate it in order to solve specific cognitive and practical issues.</td><td>Is ready to properly evaluate the acquired knowledge, respect it and disseminate it in order to solve specific cognitive and practical issues.</td><td>[SK4] test/exam - oral or written</td></tr>
<tr><td>[BCHMU2_U02] Is able to define her/his interests, develop them within the chosen direction and in connection with the subject of her/his master's thesis by implementing the process of self-education and planning her/his professional career.</td><td>Is able to define his interests, develop them within the chosen field and in connection with the subject of his master's thesis, implementing the process of self-education and planning his professional career.</td><td>[SU4] test/exam - oral or written</td></tr>
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<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>
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<tr><td>Recommended reading</td><td>
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<tr><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>
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<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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