University of Gdańsk

Subject card

Subject name and code	MSc seminar, PG_00051255		
Field of study	Chemistry		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2026/2027
Education level	Master's studies	Subject group	Obligatory subject group in the field of study 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	2	Language of instruction	English
Semester of study	3	ECTS credits	4.0
Learning profile	academic	Assessment form	credit
Conducting unit	Faculty of Chemistry -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Joanna Makowska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	0.0	30.0	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	65.0	100

Subject objectives

Development of in-depth skills in preparing and presenting oral presentations in English, mainly in the field of subjects related to the MA thesis.
Preparation for independent collection and processing of scientific information based on literature searches.
Knowledge of the principles of preparing and writing substantive and formally correct simple scientific publications, with particular emphasis on the thesis.
Monitoring the progress of each student's project work in the framework of the parallel masters' workshop.

Preparation for the master's exam.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[CHEMMU2_U10] Reads with understanding scientific and popular science chemical texts in English.	- Student develops the ability to recognize and understand specialized terms in chemistry, such as names of chemical compounds, reactions, functional groups, etc. in English - By reading scientific texts in English, student learns to analyze and synthesize information, extract key concepts and understand complex chemical issues. - Student develops the ability to think critically and assess the quality of information regarding the context of research and evaluation of results.	[SU1] oral statement/conversation/ discussion
[CHEMMU2_W13] Demonstrates knowledge of legal and ethical conditions related to scientific and didactic work.	-Student knows the basic concepts and principles related to the protection of intellectual property. Knows the principles of copyright and patent law. - Student independently uses literature databases and critically selects source texts. - Student is aware of the consequences of disregarding intellectual property and the abuse of artificial intelligence tools in research and teaching work.	[SW3] text preparation/written work
[CHEMMU2_U07] Defines and implements the directions of own further education.	-Student verifies his or her level of knowledge and skills and then undertakes the task of further education; - Understands the need for continuous professional education and personal development, demonstrates creativity in working independently and in a team; is characterized by perseverance in taking up personal and professional challenges, is able to work in a group, taking on various roles	[SU2] presentation/project/paper/ report
[CHEMMU2_W02] Has extended and in-depth knowledge in the field of basic chemistry.	-Student is able to discuss specialized topics both in Polish and English, correctly arguing his or her conclusions in the field of chemistry at an advanced level in the research topic in which he or she is involved. - Student knows how to correctly interpret and analyze related information related to basic chemical laws and issues.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
[CHEMMU2_W14] Explains the basic concepts and principles in the field of industrial property and copyright protection and recalls knowledge about the management of intellectual property resources; is able to use patent information.	- Student knows the basic concepts and principles related to the protection of intellectual property. - Student knows the principles of copyright and patent law. - Student is aware of the consequences of disregarding intellectual property and the abuse of artificial intelligence tools in scientific and research work	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report

Course outcome	Subject outcome	Method of verification
[CHEMMU2_K05] Understands the need for independent search of information in scientific literature and popular science magazines.	Student: maintains criticism in expressing opinions and is open to the opinions of the environment, shows activity in deepening knowledge of the topics related to the master thesis and understands the need to constantly expand knowledge and skills, independently works on exploring English-language literature on the topic of master thesis and on related scientific tasks, involves in scientific discussions, demonstrates responsibility for detail and accurate providing scientific information	[SK3] text preparation/written work
[CHEMMU2_W15] Formulates general principles for creating and developing selected forms of individual entrepreneurship enabling the use of knowledge coming from science.	Student correctly identifies and resolves dilemmas related to performing a profession related to exact sciences. The student uses his knowledge in practice. He works on projects, experiments and is creative. Demonstrates creativity in working independently and is able to work in a team, performing various roles. Takes actions taking into account priorities to achieve the intended goals, demonstrates responsibility for the safety of one's own work, that of others and the workplace, and follows the rules of conduct in emergencies	[SW2] presentation/project/paper/ report
[CHEMMU2_W12] Knows the principles of occupational health and safety to the extent that allows independent work on a research and/or measurement position.	- Student understands the need to exercise due caution when using laboratory equipment and working with chemical reagents; - The student knows the applicable regulations and guidelines regarding occupational health and safety in his field. He is aware of how to prevent accidents and knows the appropriate equipment for his workstation	[SW5] implementation of a problem task
[CHEMMU2_U08] Prepares and presents oral presentations in various fields of chemistry in Polish and English, using acquired knowledge and skills as well as basic sources of scientific information.	Student: demonstrates substantive preparation for the use of chemical literature, demonstrates extended skills in understanding scientific texts in the field of chemistry in English, develops and uses literature on scientific topics related to her/his master thesis, in order to use/ present them in the prepared master's thesis, logically and clearly presents the developed topic in the form of an oral presentation with a multimedia presentation, substantively participates in the discussion and shows interest in the subject presented by other speakers.	[SU2] presentation/project/paper/ report

Subject contents	Rules for searching, collecting and processing scientific information based on various types of literature sources and databases in English. Principles of written preparation and editing of substantive and formally correct simple scientific publications, with particular emphasis on the thesis in the field of exact and natural sciences. Rules for preparing substantive and formally correct oral presentations at the popular science level in English, using multimedia techniques. Multimedia presentations in the thematic field related to broadly understood digital chemistry, with particular emphasis on the physics-based methods and data-based (chemoinfomratics) methods, as well as issues related to realized master thesis.

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="3">Knowledge of general, inorganic, and organic chemistry, biochemistry, and mathematics at the first-cycle education. Knowledge of basic issues in the field of quantum chemistry, chemometrics and/or related scientific fields. Specific knowledge and skills in programming in Python and/or R.</td></tr>
<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>Implementation of a research project in practice and preparation of a description of the results and interpretation of data</td><td>100.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Literature required to pass the course

A.1. Literature used during classes:

Books and scientific articles related to the topic of master thesis

A.2. Literature for individual studies

Books and scientific articles related to the topic of master thesis</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Extracurricular readings

Books and scientific articles related to the topic of master thesis</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"></td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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