

**Subject card**

|  |   |  |   |                                     |  |            |     |
|--|---|--|---|-------------------------------------|--|------------|-----|
| <b>Subject name and code</b>                       | M.Sc. seminar, PG_00144471  |  |   |                                     |  |            |     |
| <b>Field of study</b>                              | Chemistry   |  |   |                                     |  |            |     |
| <b>Date of commencement of studies</b>             | October 2024  | <b>Academic year of realisation of subject</b>           |   |                                     |  | 2025/2026  |     |
| <b>Education level</b>                             | postgraduate studies  | <b>Subject group</b>                                     |   |                                     | Obligatory subject group in the field of study<br>Optional subject group |            |     |
| <b>Mode of study</b>                               | full-time studies   | <b>Mode of delivery</b>                                  |   |                                     | at the university  |            |     |
| <b>Year of study</b>                               | 2   | <b>Language of instruction</b>                           |   |                                     | Polish   |            |     |
| <b>Semester of study</b>                           | 4   | <b>ECTS credits</b>                                      |   |                                     | 4.0  |            |     |
| <b>Learning profile</b>                            | academic  | <b>Assessment form</b>                                   |   |                                     |  |            |     |
| <b>Conducting unit</b>                             | Faculty of Chemistry  |  |   |                                     |  |            |     |
| <b>Name and surname of lecturer (lecturers)</b>    | <b>Subject supervisor</b>   |  | dr hab. Joanna Makowska   |                                     |  |            |     |
|  | <b>Teachers</b>   |  | prof. dr hab. Beata Liberek<br>prof. dr hab. Piotr Skowron<br>dr hab. Alicja Boryło<br>dr hab. Agnieszka Gajewicz-Skrętna<br>prof. dr hab. inż. Adriana Zaleska-Medynska<br>prof. dr hab. Sylwia Rodziewicz-Motowidło<br>dr hab. Aneta Szymańska<br>dr Katarzyna Kuncewicz<br>dr hab. Sylwia Freza<br>dr Samanta Romanowska<br>dr hab. Adam Sieradzan<br>dr hab. Beata Grobelna<br>prof. dr hab. Mariusz Makowski<br>dr hab. Monika Paszkiewicz |                                     |  |            |     |
| <b>Lesson types</b>                                | <b>Lesson type</b>  | Lecture  | Tutorial  | Laboratory                          | Project  | Seminar    | SUM |
|  | <b>Number of study hours</b>  | 0.0  | 0.0   | 0.0                                 | 0.0  | 30.0       | 30  |
|  | E-learning hours included: 0.0  |  |   |                                     |  |            |     |
| <b>Learning activity and number of study hours</b> | <b>Learning activity</b>  | Participation in didactic classes included in study plan |   | Participation in consultation hours |  | Self-study | SUM |
|  | <b>Number of study hours</b>  | 30   |   | 5.0                                 |  | 65.0       | 100 |
| <b>Subject objectives</b>                          | Development of in-depth skills in preparing and presenting oral presentations in Polish, mainly in the field of subjects related to the MA thesis<br>Preparation for independent collection and processing of scientific information based on literature searches<br>Knowledge of the principles of preparing and writing substantive and formally correct simple scientific publications, with particular emphasis on the thesis.<br>Monitoring the progress of each student's project work in the framework of the parallel masters' workshop |  |   |                                     |  |            |     |

| Learning outcomes | Course outcome  | Subject outcome   | Method of verification  |
|-------------------|---|---|---|
|                   | [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: <ul style="list-style-type: none"> <li>• demonstrates basic knowledge of legal and ethical conditions related to scientific activities, including protection of intellectual property and copyright;</li> <li>• demonstrates general knowledge in the field of broadly understood chemistry and biochemistry of amino acids, peptides and proteins and their derivatives.</li> <li>• presents expanded knowledge about current development directions and the latest scientific achievements in the field of the topic of master thesis</li> </ul>   | [SW4] test/exam - oral or written<br>[SW2] presentation/project/paper/report  |
|                   | [CHEMMU2_U06] Presents the results of scientific discoveries in chemistry and related disciplines in an understandable way.   | -Student is able to discuss specialized topics, 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.<br>- Student is able to develop communication skills in translating complex topics into a clear and understandable language   | [SU2] presentation/project/paper/report                                       |
|                   | [CHEMMU2_U10] Reads with understanding scientific and popular science chemical texts in English.  | -Student develops the ability to recognize and understand specialized terms from the field of chemistry, such as names of chemical compounds, reactions, functional groups, etc. in English.<br>- By reading scientific texts, student learns to analyze information 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   | [SU3] text preparation/written work<br>[SU5] implementation of a problem task |
|                   | [CHEMMU2_K03] Understands the need for systematic work on various projects of a long-term nature and knows how to set priorities for the implementation of undertaken tasks.  | Student: <ul style="list-style-type: none"> <li>• maintains criticism in expressing opinions and is open to the opinions of the environment</li> <li>• shows activity in deepening knowledge of the topics related to the master thesis and understands the need to constantly expand knowledge and skills</li> <li>• independently works on exploring English-language literature on the topic of master thesis and on related scientific tasks</li> <li>• involves in scientific discussions</li> <li>• demonstrates responsibility for detail and accurate providing scientific information</li> </ul> | [SK5] implementation of a problem task  |

|                                 | Course outcome  | Subject outcome   | Method of verification  |
|---------------------------------|---|---|---|
|                                 | [CHEMMU2_U02] Critically assesses the results of conducted, performed observations and theoretical calculations and discusses errors.   | Student: <ul style="list-style-type: none"> <li>• demonstrates substantive preparation for the use of chemical literature</li> <li>• demonstrates extended skills in understanding scientific texts in the field of chemistry both in Polish and English;</li> <li>• 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;</li> <li>• logically and clearly presents the developed topic in the form of an oral presentation with a multimedia presentation;</li> <li>• substantively participates in the discussion and shows interest in the subject presented by other speakers;</li> </ul> | [SU1] oral statement/conversation/discussion<br>[SU2] presentation/project/paper/report |
|                                 | [CHEMMU2_U05] Presents the results of research in the form of an independently written paper containing a description and justification of the purpose of the work, adopted methodology, results and their significance in comparison to other similar research.  | -Student is able to prepare a written work, correctly edit the content of the work, containing a description of the purpose, methodology, obtained results and their significance in the context of other research.   | [SU2] presentation/project/paper/report<br>[SU3] text preparation/written work          |
|                                 | [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 is able to prepare and present a paper in both Polish and English, correctly arguing his or her conclusions in the field of chemistry and related sciences. At work, he knows how to correctly interpret and analyze information related to basic chemical laws.<br>- By reading scientific texts, student learns to analyze and synthesize information, extract key concepts and understand complex issues.   | [SU2] presentation/project/paper/report   |
|                                 | [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<br>- Student is aware of the consequences of disregarding intellectual property and the abuse of artificial intelligence tools in research and teaching work.   | [SW1] oral statement/conversation/discussion  |
| Subject contents                | Rules for searching, collecting and processing scientific information based on various types of literature sources and databases in Polish and English.<br>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.<br>Rules for preparing substantive and formally correct oral presentations at the popular science level in Polish, using multimedia techniques<br>Multimedia presentations in the thematic field related to broadly understood organic chemistry, with particular emphasis on the chemistry of amino acids, peptides and proteins, as well as issues related to realized master thesis. |   |   |
| Prerequisites and co-requisites | First cycle studies in chemistry, environmental protection, chemical engineering and related fields.<br><br>Knowledge of basic issues in the field of chemistry and / or related scientific fields.   |   |   |
| Assessment methods and criteria | Subject passing criteria  | Passing threshold   | Percentage of the final grade   |
|                                 | Preparing and presenting several oral presentations, mainly on topics related to the master's thesis  | 100.0%  | 100.0%  |

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|--|--------------------------|--|
| Recommended reading  | Basic literature         | Literature required to pass the course<br><br>A.1. Literature used during classes:<br>Books and scientific articles related to the topic of master thesis<br><br>A.2. Literature for individual studies<br>Books and scientific articles related to the topic of master thesis |
|  | Supplementary literature | B. Extracurricular readings<br>Books and scientific articles related to the topic of master thesis   |
|  | eResources addresses     | Adresy na platformie eNauczenie:   |
| Example issues/<br>example questions/<br>tasks being completed |                          |  |
| Work placement   | Not applicable           |  |

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