University of Gdańsk

Subject card

Subject name and code	Organic chemistry, PG_00146885		
Field of study	Genetics and Experimental Biology		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2025/2026
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	3.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Carbohydrate Chemistry -> Department of Organic Chemistry -> Faculty of Chemistry -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Janusz Madaj	
	Teachers	dr hab. Janusz Madaj prof. dr hab. Beata Liberek dr Daria Grzywacz mgr Grzegorz Detlaff dr hab. Rafał Ślusarz	

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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	8.0	37.0	75

Subject objectives	presenting students with basic issues regarding organic chemistry familiarizing students with the basic types of organic compounds and their basic biological role learning the basics of independently conducting chemical experiments

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GBEL3_K08] Responsibility for entrusted equipment/materials and respect for the work of others.	observation and assessment of the student's skills (the student can correctly choose the level of tasks in the context of your skills, excellent organizes and manages group work, perfectly organizes the workstation, observing the sequence of procedures performed)	[SK5] implementation of a problem task
[GBEL3_K05] Responsibility for the safety of one's own work and others.	observation and assessment of the student's skills (the student can correctly choose the level of tasks in the context of your skills, excellent organizes and manages group work, perfectly organizes the workstation, observing the sequence of procedures performed)	[SK5] implementation of a problem task
[GBEL3_W02] Knowledge of mathematics, physics, and chemistry is necessary for understanding biological phenomena and processes, as well as their application in research methodology.	written works, final tests (the student knows laboratory techniques and the principles of using research equipment and the basics of its operation)	[SW5] implementation of a problem task
[GBEL3_K07] Lifelong learning and updating knowledge in the field of molecular genetics and other disciplines.	observation and assessment of the student's skills (the student can correctly choose the level of tasks in the context of your skills, excellent organizes and manages group work, perfectly organizes the workstation, observing the sequence of procedures performed)	[SK5] implementation of a problem task
[GBEL3_U01] Independently perform practical tasks in the field of biological sciences and related disciplines, formulate research problems, analyze their results, and draw conclusions.	final tests, conducting an experiment, research report laboratory (the student is able to carry out experiments related to the synthesis of organic compounds, correctly selecting experimental techniques and equipment, correctly documenting the results of his work using the current nomenclature, is able to apply the knowledge acquired outside classes and exercise instructions to plan subsequent experiments)	[SU5] implementation of a problem task
[GBEL3_U03] Proficient in using research equipment and tools, while following the correct sequence of procedures, to conduct basic physical, biological, or chemical observations and measurements in laboratory work within the field of biological sciences.	final tests, conducting an experiment, research report laboratory (the student is able to carry out experiments related to the synthesis of organic compounds, correctly selecting experimental techniques and equipment, correctly documenting the results of his work using the current nomenclature, is able to apply the knowledge acquired outside classes and exercise instructions to plan subsequent experiments)	[SU5] implementation of a problem task
[GBEL3_K02] Critical assessment of one's own knowledge and methods in the field of molecular biology and related disciplines, as well as the commercialization of research.	observation and assessment of the student's skills (the student can correctly choose the level of tasks in the context of your skills, excellent organizes and manages group work, perfectly organizes the workstation, observing the sequence of procedures performed)	[SK5] implementation of a problem task
[GBEL3_W09] principles of safety and hygiene, as well as ergonomics in the workplace.	written works, final tests (the student knows laboratory techniques and the principles of using research equipment and the basics of its operation)	[SW5] implementation of a problem task

<table>
<tr><td>Subject contents</td><td colspan="3">Issues of laboratory exercises: basics of laboratory work, performing several exercises/experiments thematically related to the lecture program.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td colspan="3">Basic knowledge of general chemistry</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>Pass with grade</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 colspan="2">Organic Chemistry, 4th Edition, Paula Yurkanis Bruice
Organic Chemistry, 5th Edition, L. G. Wade
General, Organic, and Biological Chemistry, 5th Edition, H. Stephen Stoker
Morrison R., Boyd R. 1999. Chemia organiczna. PWN, Warszawa.
McMurry John, 2005. Chemia organiczna, Wydawnictwo Naukowe PWN
Kupryszewski G., Sobocińska M., Walczyna R. 1988. Podstawy preparatyki związków organicznych. Wyd. Gdańskie, Gdańsk.
Walczyna R., Sokołowski J., Kupryszewski G. 1996. Analiza związków organicznych. Wyd. UG, Gdańsk.</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">non</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">Consistent with the content of classes.</td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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