University of Gdańsk

Subject card

Subject name and code	Organic chemistry, PG_00198297						
Field of study	Genetics and Experimental Biology						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2026/2027		
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						
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_U03] The graduate is able to: use research apparatus and tools and, following the correct sequence of operations, carry out simple physical, biological or chemical observations and measurements in laboratory work in the 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_U01] The graduate is able to: independently perform practical tasks in the biological and related sciences, formulate research problems, analyse 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_K08] The graduate is prepared to: takes responsibility for equipment/materials entrusted to it and respects 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_K07] The graduate is prepared to: lifelong learning and updating of knowledge in molecular genetics and other fields.	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_K02] The graduate is prepared to: critically evaluate their own knowledge and methods in molecular biology and related fields and commercialise their 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_K05] The graduate is prepared to: responsibility for their own and others' safety at work	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] A graduate has an advanced knowledge and understanding of:: knowledge of mathematics, physics and chemistry to the extent necessary for understanding biological phenomena and processes and 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

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<tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr>
<tr><td>[GBEL3_W09] A graduate has an advanced knowledge and understanding of: principles of occupational health and safety and ergonomics.</td><td>written works, final tests (the student knows laboratory techniques and the principles of using research equipment and the basics of its operation)</td><td>[SW5] implementation of a problem task</td></tr>
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<tr><td>Subject contents</td><td>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>Basic knowledge of general chemistry</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>Pass with grade</td><td>51.0%</td><td>100.0%</td></tr>
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<tr><td>Recommended reading</td><td><table>
<tr><td>Basic literature</td><td>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>non</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Consistent with the content of classes.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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