

Subject card

Subject name and code	Organic chemistry, PG_00203422						
Field of study	Medical 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, prof. UG				
	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		6.0		39.0	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 introducing students to the basics of spectroscopy learning the basics of independently conducting chemical experiments						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_K01] is aware of the importance of lifelong learning and keeping up to date with developments in medical biology and related disciplines, and applies this knowledge to the planning and design of professional activities	observation and assessment of the student's skills (the student is able to correctly select the level of tasks in the context of his/her own skills, perfectly organizes and manages group work, perfectly organizes the workstation, following the sequence of procedures performed)	[SK5] implementation of a problem task
	[BIOLMEDL3_U01] is able to use and operate basic research equipment and tools employed in molecular-biochemical analysis or neurobiology and, following the correct sequence of steps, carries out simple physical, biological or chemical observations and measurements in laboratory work in the field of biological or medical sciences	final tests, conducting an experiment, report on laboratory tests (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, can apply knowledge acquired outside classes and exercise instructions to plan subsequent exercises experiments)	[SU5] implementation of a problem task
	[BIOLMEDL3_W12] is familiar with the principles of occupational safety, health, and ergonomics, as well as the legal, organizational, and ethical considerations involved in the professional practice of a neurobiologist or molecular-biochemical analyst	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
	[BIOLMEDL3_W06] defines the key laws and principles of physics and chemistry that underpin biological processes, describes the properties of elements and chemical compounds, and has an advanced knowledge and understanding of the physicochemical and biological foundations of health sciences	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
	[BIOLMEDL3_U11] has the ability to present his own ideas and adequate argumentation in the context of selected theoretical and practical perspectives of medical biology	final tests, conducting an experiment, report on laboratory tests (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, can apply knowledge acquired outside classes and exercise instructions to plan subsequent exercises experiments)	[SU5] implementation of a problem task
	[BIOLMEDL3_U04] synthesises data from different sources and draws appropriate conclusions from them	final tests, conducting an experiment, report on laboratory tests (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, can apply knowledge acquired outside classes and exercise instructions to plan subsequent exercises experiments)	[SU5] implementation of a problem task
	[BIOLMEDL3_K02] is aware of their own limitations and knows when to turn to experts who have the resources, technologies and knowledge to provide certainty on a given topic, save time and avoid mistakes	observation and assessment of the student's skills (the student is able to correctly select the level of tasks in the context of his/her own skills, perfectly organizes and manages group work, perfectly organizes the workstation, following the sequence of procedures performed)	[SK5] implementation of a problem task

	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_K04] jest odpowiedzialny za bezpieczeństwo pracy własnej i innych oraz potrafi rozpoznać sytuacje zagrożenia i podjąć odpowiednie działania	observation and assessment of the student's skills (the student is able to correctly select the level of tasks in the context of his/her own skills, perfectly organizes and manages group work, perfectly organizes the workstation, following the sequence of procedures performed)	[SK5] implementation of a problem task
Subject contents	Issues of laboratory exercises: basics of laboratory work, performing several exercises/experiments thematically related to the above mentioned lecture program		
Prerequisites and co-requisites	Basic knowledge of general and analytical chemistry		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	conducting planned chemical experiments	51.0%	100.0%
Recommended reading	Basic literature	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, 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.	
	Supplementary literature	non	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Consistent with the content of classes		
Work placement	Not applicable		

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