

Subject card

Subject name and code	Organic chemistry, PG_00050795						
Field of study	Environmental Protection						
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026				
Education level	undergraduate 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	2	Language of instruction	Polish				
Semester of study	3	ECTS credits	1.0				
Learning profile	academic	Assessment form					
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. Beata Liberek					
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	0.0	0.0	15
	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	15	2.0	8.0	25		
Subject objectives	Acquiring knowledge about typical groups of organic compounds, their structure, nomenclature, physical properties and characteristic reactions; learning about the types of organic reactions and selected mechanisms; to familiarize students with the problems of isomerism, in particular stereoisomerism.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[OŚL3_W01] Discusses the basic concepts of mathematics, physics, chemistry and biology. Describes physical, chemical and biological phenomena occurring in nature as well as geological, geomorphological and climatic conditions of the functioning of nature.	Lists and characterizes the basic groups of organic compounds; Associates the structure of an organic compound with its physical properties; Lists the types of bonds and explains how to create them; Names electronic effects and explains their impact on the stabilization, acidity and reactivity of an organic compound; knows the basic reactions characteristic of a given group of organic compounds; Defines types of organic reactions; Knows the basic mechanisms reaction; Lists and characterizes types of isomerism, defines and distinguishes stereoisomers.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
	[OŚL3_U11] Uses statistical methods as well as algorithms and IT techniques, including application software packages to describe environmental experiments and analysis of typical data in socio-economic activities based on science and natural sciences.	Classifies all chemical groups of organic compounds provided for in the minimum curriculum; Predicts the properties of an organic compound based on its structure, proposes characteristic reactions; Recognizes and classifies isomers; Analyzes chemical data and describes the behavior of an organic compound in the environment.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
	[OŚL3_U02] Plans, selects appropriate research and measuring equipment and devices, performs physicochemical measurements and experiments; analyses the results and draws conclusions based on them.	Analyzes and solves basic problems of organic chemistry; Plans syntheses; Analyzes organic compounds based on physicochemical measurements. Analyzes the results and formulates conclusions.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
	[OŚL3_K04] Demonstrates responsibility for the safety of her/his own and others' work and for the workplace, and correctly follows the rules of conduct in emergencies.	Demonstrates independence and responsibility when making decisions; Adheres to the principles of teamwork and is able to take responsibility for jointly performed tasks; In team and individual work, he is guided by ethical principles; Is responsible for the safety of his own and others' work.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written
	[OŚL3_W13] Defines the basic principles of occupational safety, ergonomics and hygiene.	Recognizes dangerous organic substances and knows how to deal with them.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
	[OŚL3_U09] Prepares in Polish/English a short description of research, observation or problem task carried out during classes using appropriate scientific terminology.	Describes phenomena related to organic chemistry; Uses organic terminology.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
	[OŚL3_K05] Identifies the level of her/his knowledge and skills, demonstrates the need to update knowledge about the environment and its protection, demonstrates the need for continuous professional training and personal development.	Understands the importance of organic chemistry for environmental protection and other natural sciences; Is aware of the limitations of his own knowledge and competences, understands the need for further education.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written
Subject contents	Solving problems concerning relationships between structure and properties, including reactivity, organic compounds; physical and chemical properties of subsequent groups of organic compounds discussed in the framework lecture; isomerism of organic compounds, with particular emphasis on stereoisomerism; basic types of organic reactions and their mechanisms.		
Prerequisites and co-requisites	Passed general chemistry course.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	A positive result is required in two tests covering the first and second parts, respectively, of the material covered during the classes.	51.0%	100.0%

Recommended reading	Basic literature	<p>J. McMurry Chemia organiczna</p> <p>G. Kupryszewski Wstęp do chemii organicznej</p> <p>J. Wade Organic Chemistry</p> <p>P. Y. Bruice Organic Chemistry</p>
	Supplementary literature	<p>R. T. Morrison, R. N. Boyd Chemia organiczna</p> <p>P. Mastalerz Chemia organiczna</p>
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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