



## Subject card

Subject name and code	Organic chemistry, PG_00060851						
Field of study	Chemical Technology						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study Subject group related to scientific research 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		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Organic Chemistry -> Faculty of Chemistry -> Wydziały Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Magdalena Śliwka-Kaszyńska				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	30.0	0.0	0.0	0.0	45
	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	45		10.0		65.0	120
Subject objectives	Knowledge of the structure, physicochemical properties and reactivity of organic compounds.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U03] is able to apply knowledge of inorganic, organic, physical and analytical chemistry and identify appropriate sources of information to design and synthesize simple chemical compounds, carry out basic physicochemical and analytical measurements		The student draws correct structural formulas of organic compounds. The student recognizes the structures of organic compounds. The student has knowledge of the nomenclature of organic compounds. The student explains the relationship between the structure of an organic compound and its reactivity. The student identifies atomic and molecular orbitals.		[SU3] Assessment of ability to use knowledge gained from the subject		
	[K6_W02] has knowledge of inorganic, organic, physical and analytical chemistry useful for obtaining selected groups of compounds, determining their physical and chemical properties allowing for their quantitative and qualitative analysis, making measurements and determining the parameters of chemical reactions, phenomena and processes occurring in chemical technology		The student is able to use knowledge of inorganic, organic, physical and analytical chemistry to obtain specific chemical compounds and to determine their physicochemical properties. The student is able to perform quantitative and qualitative analysis, make appropriate measurements and determine the parameters of chemical processes occurring in the chemical technology.		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U11] individually plans and implements his/her own learning		The student is able to independently plan and implement his/her own learning.		[SU3] Assessment of ability to use knowledge gained from the subject		

Subject contents	Alkanes, Cycloalkanes Reactivity and Stereochemistry of Alkanes and Cycloalkanes Nucleophilic Substitution Reactions Elimination Reactions Alkenes, Alkene Reactivity Alkynes, Alkyne Reactivity Conjugated Multiple Bond Systems Aromatic Compounds, Electrophilic Substitution and Nucleophilic Substitution Reactions Alcohols, Ethers, Epoxides		
Prerequisites and co-requisites	Basic topics in inorganic and physical chemistry.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	3 written tests	60.0%	100.0%
Recommended reading	Basic literature	R. T. Morison; R. N. Boyd; Chemia Organiczna, Wydawnictwo naukowe PWN, Warszawa 1996.  J. McMurry Chemia Organiczna, Wydawnictwo naukowe PWN, Warszawa 2000.  J. D. Caserio, M. C. Roberts, CHEMIA ORGANICZNA, PWN Warszawa, 1969.	
	Supplementary literature	J. March Chemia Organiczna- reakcje , mechanizmy , budowa. Wydawnictwo Naukowo Techniczne , Warszawa 1975.  J. Gawroński, K. Gawrońska, K. Kacprzak, M. Kwit WSPÓŁCZESNA SYNTEZA ORGANICZNA, WN PWN Warszawa 2004.  J. March CHEMIA ORGANICZNA - Reakcje, mechanizmy, budowa, WNT Warszawa 1975.  H. O. House NOWOCZESNE REAKCJE SYNTEZY ORGANICZNEJ, PWN Warszawa 1979.  T. W. G. Solomons ORGANIC CHEMISTRY - 6th ed, John Wiley & Sons, Inc. New York, 1996.	
	eResources addresses		
	Example issues/ example questions/ tasks being completed	Draw the chemical structure of the following hydrocarbons: 6-isopropyl-2,3-dimethylnonane, cyclobutylcyclobutane, 4-tert-butyl-3-methylheptane, (2,2-dimethylpropyl)cyclohexane, 4-isobutyl-1,1-dimethylcyclohexane, pentacosane, sec-butylcycloheptane, 10-(1-methylpentyl)pentacosane	
Work placement	Not applicable		

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