

## 。 GDAŃSK UNIVERSITY OF TECHNOLOGY

## Subject card

Subject name and code	Organic chemistry, PG_00060851								
Field of study	Chemical Technology								
Date of commencement of studies	October 2023		Academic year of realisation of subject			2024/2025			
Education level	n 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						
Name and surname	Subject supervisor dr hab.			r hab. Magdalena Śliwka-Kaszyńska					
of lecturer (lecturers)	Teachers		dr hab. Magd	dr hab. Magdalena Śliwka-Kaszyńska					
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
of instruction	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 classes includ plan	n didactic ed in study	Participation in consultation hours		Self-study SUM		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_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				
	[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			
	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		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.			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	<ul> <li>R. T. Morison; R. N. Boyd; Chemia Organiczna, Wydawnictwo naukowe PWN, Warszawa 1996.</li> <li>J. McMurry Chemia Organiczna, Wydawnictwo naukowe PWN, Warszawa 2000.</li> <li>J. D. Caserio, M. C. Roberts, CHEMIA ORGANICZNA, PWN Warszawa, 1969.</li> </ul>					
	Supplementary literature	<ul> <li>J. March Chemia Organiczna- reakcje, mechanizmy, budowa.</li> <li>Wydawnictwo Naukowo Techniczne, Warszawa 1975.</li> <li>J. Gawroński, K. Gawrońska, K. Kacprzak, M. Kwit WSPÓŁCZESNA SYNTEZA ORGANICZNA, WN PWN Warszawa 2004.</li> <li>J. March CHEMIA ORGANICZNA - Reakcje, mechanizmy, budowa, WNT Warszawa 1975.</li> <li>H. O. House NOWOCZESNE REAKCJE SYNTEZY ORGANICZNEJ, PWN Warszawa 1979.</li> <li>T. W. G. Solomons ORGANIC CHEMISTRY - 6th ed, John Wiley &amp; Sons, Inc. New York, 1996.</li> </ul>					
	eResources addresses	Adresy na platformie eNauczanie:					
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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