



## Subject card

Subject name and code	Organic chemistry, PG_00035967						
Field of study	Chemical Technology						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2024/2025		
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	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			5.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Organic Chemistry -> Faculty of Chemistry						
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	30.0	30.0	0.0	0.0	0.0	60
	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	60	5.0		60.0		125
Subject objectives	Knowledge of the structure, physicochemical properties and reactivity of organic compounds						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_W02	Student has knowledge of the chemical structures of organic compounds, recognizes the structures of organic compounds. Student knows the nomenclature of organic compounds and the relationship between the structure of the organic compound and its reactivity.					
	K6_U03						
Subject contents	Phenols, Organometallic compounds Carbonyl compounds; structure, reactivity Nucleophilic addition reactions to the carbonyl group Aldol condensation reactions. Carboxylic acids, structure and physical properties Carboxylic acid derivatives: acid chlorides, anhydrides, esters and amides, nitriles Claisen condensation reactions and related processes Malonic syntheses Amines Diazonium salts Nucleophilic addition reactions to $\alpha$ , $\beta$ -unsaturated carbonyl compounds Carbonic acid derivatives Halogeno acids, hydroxy acids, amino acids						

Prerequisites and co-requisites	Structure of elements and their compounds, especially carbon; the concept of acids, bases and salts; types of reactions; particle geometry; kinetics and thermodynamics of chemical reactions		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	short tests	60.0%	50.0%
	egzam tests	60.0%	50.0%
Recommended reading	Basic literature	<p>R. T. Morison; R. N. Boyd; Organic Chemistry, PWN, Warszawa 1996.</p> <p>J. McMurry Organic Chemistry, PWN, Warszawa 2000.</p> <p>J. D. Caserio, M. C. Roberts, Organic Chemistry, PWN Warszawa, 1969</p>	
	Supplementary literature	<p>J. March Chemia Organiczna- reakcje , mechanizmy , budowa. Wydawnictwo Naukowo Techniczne , Warszawa 1975.</p> <p>J. Gawroński, K. Gawrońska, K. Kacprzak, M. Kwit WSPÓŁCZESNA SYNTEZA ORGANICZNA, WN PWN Warszawa 2004.</p> <p>J. March CHEMIA ORGANICZNA - Reakcje, mechanizmy, budowa, WNT Warszawa 1975.</p> <p>H. O. House NOWOCZESNE REAKCJE SYNTEZY ORGANICZNEJ, PWN Warszawa 1979.</p> <p>T. W. G. Solomons ORGANIC CHEMISTRY - 6th ed, John Wiley &amp; Sons, Inc. New York, 1996</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	<p>1. Give a synthetic route of acetylsalicylic acid from phenol.</p> <p>2. Write mechanism of acidic hydrolysis of 1,1-dimethoxyklohexane.</p>		
Work placement	Not applicable		