

## 关。GDAŃSK UNIVERSITY 创 OF TECHNOLOGY

## Subject card

Subject name and code	Organic Chemistry, PG_00036272								
Field of study	Green Technologies								
Date of commencement of studies	October 2020		Academic year of realisation of subject			2021/2022			
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	4		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 prof. dr hab. inż. Krystyna Dzierzbicka								
of lecturer (lecturers)	Teachers		prof. dr hab. inż. Krystyna Dzierzbicka						
			dr hab. inż. Sebastian Demkowicz						
			dr inż. Monika Gensicka-Kowalewska						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
	Number of study hours	0.0	0.0	60.0	0.0		0.0	60	
	E-learning hours included: 0.0							•	
	Adresy na platformie eNauczanie:								
Learning activity and number of study hours	Jdy hours		articipation in didactic asses included in study an		Participation in consultation hours		udy	SUM	
	Number of study hours	60		5.0		35.0		100	
Subject objectives	Familiarization with laboratory sets for typical activities performed in the laboratory, independent implementation of planned syntheses.								
Learning outcomes	Course outcome		Subject outcome			Method of verification			
	[K6_U01] is able to obtain information from literature, databases and other sources, is able to integrate the information obtained, to make their interpretation, as well as draw conclusions and formulate and justify opinions, take part in the discussion		Student draws a correct structural formulas of organic compounds. Student identifies separate class of organic compounds.			[SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information			
	[K6_W02] has a basic knowledge of chemistry including general chemistry, inorganic, organic, physical, analytical, including the knowledge necessary to describe and understand the phenomena and chemical processes occurring in the environment; measurement and the determination of the parameters of these processes.		Student classifies organic reaction mechanisms of organic compounds. Student assembles laboratory sets for typical activities performed in the laboratory.			[SW1] Assessment of factual knowledge			

Subject contents	Specification of preparations:						
	1. Oxidation and reduction reactions						
	2. Aldehydes and ketone,						
	3. Carboxylic acids and their derivatives						
	IV. Diazonium salts in organic synthesis						
	V. Applications of reactions of magnesium organic compounds (Grignard reagents)						
Prerequisites and co-requisites	Basic inorganic chemistry. Knowledge of the symbols of elements, the valence and ability to perform simple stoichiometric calculation.						
Assessment methods	Subject passing criteria	Passing threshold	Percentage of the final grade				
and criteria	Implementation of the planned syntheses. Collecting the appropriate number of points in accordance with the laboratory regulations.	60.0%	100.0%				
Recommended reading	Basic literature	1. D. Witt, K. Dzierzbicka, J. Rachoń – Syntezy i transformacje związków organicznych.					
		Wydawnictwo Politechniki Gdańskiej, Gdańsk 2007.					
		2. K. Dzierzbicka, G. Cholewiński, J. Rachoń – Aparatura i procesy jednostkowe stosowane w laboratorium chemii organicznej. Wydawnictwo Politechniki Gdańskiej, Gdańsk 2018.					
		3. A.I. Vogel - Preparatyka Organiczna, WNT Warszawa 2006.					
	Supplementary literature	1. K. Dzierzbicka, D. Witt, J. Rachoń <i>– Preparatyka związków</i> organicznych. Ćwiczenia					
		<i>laboratoryjne</i> . Wydawnictwo Politechniki Gdańskiej, Gdańsk 2011.					
		2. B. Bochwic (tłum) – <i>Preparatyka Organiczna</i> , PWN Warszawa 1971.					
	eResources addresses						
Example issues/ example questions/ tasks being completed	1. Synthesis of benzoic acid from toluene.						
	2. Preparation of phenol from aniline.						
	3. Synthesis of 1,1-diphenylethen.						
Work placement	Not applicable						