



Subject card

Subject name and code	Synthesis Methods of Organic Compounds, PG_00048898						
Field of study	Chemistry						
Date of commencement of studies	October 2021	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	4	Language of instruction			Polish		
Semester of study	7	ECTS credits			5.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Organic Chemistry -> Faculty of Chemistry						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Dariusz Witt				
	Teachers		prof. dr hab. inż. Dariusz Witt				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	15.0	45.0	0.0	0.0	75
	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	75		10.0		40.0	125
Subject objectives	Student is able to develop new method of synthesis for organic compounds. Student is able to obtain desired compound by experimental procedure.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U08] is capable to design and carry out the experiment which is necessary to confirm a given hypothesis and sees wider context, often beyond-technical, of the analysed phenomena		The organic synthesis is designed by student based on the compatibility of protective groups.		[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		
	[K6_U06] can analyze the functioning of equipment, apparatus and technology lines used in laboratories and chemical industry, and can recognize and propose methods to solve the simple engineering tasks which he can meet as an Engineer and select and use routine methods, chemical apparatus and tools to solve practical engineering tasks, including also technological processes; can himself/herself read and make technical drawings using CAD software		Multi steps synthesis is developed by student		[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents	The strategy of organic synthesis Transformations of functional groups Protective groups Synthetic methods of carbon skeleton formation Synthesis of multifunctional organic compounds Synthesis of heterocyclic compounds						
Prerequisites and co-requisites	The knowledge of organic chemistry basis, structural formulas, identification of acids and bases, nucleophiles and electrophiles, delocalized orbitals.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	3 colophiums		60.0%		100.0%		

Recommended reading	Basic literature	E.J. Corey, X-M. Cheng "The Logic of Chemical Synthesis" J.Wiley&Sons, New York 1989 J. Fuhrhop, G. Penzil "Organic Synthesis" VCH 1994 S. Warren "Organic Synthesis, the disconnection approach" J.Wiley&Sons 1993 H.O. House "Nowoczesne reakcje syntezy organicznej" PWN 1979
	Supplementary literature	not applicable
	eResources addresses	Adresy na platformie eNauczanie:
	Example issues/ example questions/ tasks being completed	Based on the provided starting materials develop the synthesis of target molecule.
Work placement	Not applicable	

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