

Subject card

Subject name and code	Chemistry of polymers, PG_00082045						
Field of study	Chemistry						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2028/2029		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Optional subject group 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		1.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Piotr Rekowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	0.0	0.0	15
	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	15		2.0		8.0	25
Subject objectives	1. Polystyrene (PS) synthesis 2. Synthesis of styrene-divinylbenzene copolymer (PS-DVB) 3.Obtaining nylon thread (nylon 6.10) 4. Identification of plastics						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[CHEML3_W03] Explains the relationship between the structure of matter and its observed properties.	1. defines the basic principles of polymer chemistry 2. analyzes and evaluates the influence of some polymers on the natural environment	[SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
	[CHEML3_U01] Identifies, analyses and solves problems in the field of broadly understood chemistry on the basis of the acquired knowledge.	1. shows the structure of the commonly used synthetic polymers 2. uses basic descriptions of polymer microstructures 3. provides for some physicochemical properties (eg glass transition temperature) of polymers depending on their chemical structure and microstructure	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work
	[CHEML3_U08] Presents in an understandable way the basic facts about chemistry using a scientific language typical of chemical sciences.	1. illustrates polymerization stages by chemical reactions, 2. characterizes methods of radical, ionic and coordination polymerizations 3. describes the polyaddition and polycondensation	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work
	[CHEML3_U09] Is able to learn independently.	1. uses chemical terminology to the extent necessary to present(both in oral and written form) the content presented in the course;	[SU1] oral statement/conversation/ discussion [SU8] observation of student's independent or team work
Subject contents	Issues related to the synthesis of polymers (polystyrene and nylon 6.10) and physicochemical identification of polymers		
Prerequisites and co-requisites	Passed organic chemistry exam		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Activity and commitment during laboratory exercises	0.0%	20.0%
	Synthesis and analysis reports	51.0%	80.0%
Recommended reading	Basic literature	Literature required to pass the course: Rabek J.F., Współczesna wiedza o polimerach, PWN 2008 Pieluchowski J., Puszyński A., Chemia Polimerow Wydawnictwo AGH, Kraków 1998 Walton D., Lorimer P., Polymers, Oxford University Press 2001 Stevens M.P., Polymer Chemistry, Oxford University Press, 1999 Monographic works provided by assistants leading classes	
	Supplementary literature	Various academic handbooks concerning polymer chemistry	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Issues related to the synthesis of polymers (polystyrene and nylon 6.10) and physicochemical identification of polymers		
Work placement	Not applicable		

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