

Subject card

Subject name and code	Prototyping and elements of technological process design, PG_00134599						
Field of study	Chemistry						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2025/2026		
Education level	postgraduate studies	Subject group			Obligatory subject group 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			1.0		
Learning profile	academic	Assessment form					
Conducting unit	Pracownia Fotokatalizy -> Katedra Technologii Środowiska -> Faculty of Chemistry						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Joanna Nadolna				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	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	<ul style="list-style-type: none"> Familiarizing students with intellectual property issues, Introducing students to the process of writing a patent application, including patent claims, Introducing students to the concept of design thinking, Familiarizing students with ways of presenting their own ideas, Familiarizing students with elements of technology design. 						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[CHEMMU2_W06] Applies mathematics to the extent necessary to understand, describe and model chemical processes of medium complexity.		The student is able to perform a material balance for the designed product.		[SW2] presentation/project/paper/report		
	[CHEMMU2_U01] Plans and implements chemical experiments of medium complexity.		Plans and carries out experiments to produce a product designed by themselves on a laboratory scale.		[SU2] presentation/project/paper/report		
	[CHEMMU2_W08] Demonstrates knowledge of theoretical computational and IT methods used to solve problems in chemistry.		The student is able to perform a material balance for the designed product.		[SW2] presentation/project/paper/report		
	[CHEMMU2_K01] Knows the limitations of her/his own knowledge; understands the need for further education and can inspire other people to do so.		The student understands the importance of systematically familiarizing themselves with the latest chemical literature (including patents and articles from scientific and popular science journals). They also understand the need for deepening interdisciplinary knowledge.		[SK8] observation of student's independent or team work		

Subject contents	<ul style="list-style-type: none"> • Patents and licenses (preparing patent claims, patent search, patent purity, application preparation in Poland and worldwide), • Design thinking, • Prototyping and creative problem-solving, • Teamwork, team management, • Elements of technology design (selection of chemical and technological concepts), • Presenting ideas. 		
Prerequisites and co-requisites	Basic knowledge of English.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project	51.0%	100.0%
Recommended reading	Basic literature	Unpublished materials provided to students during classes. Patent descriptions of selected technologies. The patent descriptions will be sourced from free patent databases.	
	Supplementary literature	no	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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