

Subject card

Subject name and code	Physicochemical evaluation of cosmetic products, PG_00183755						
Field of study	Badania fizykochemiczne produktów kosmetycznych (Ćw. laboratoryjne)						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2026/2027		
Education level	Master'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	1		Language of instruction		Polish Polish		
Semester of study	2		ECTS credits		2.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Laboratory of Chemistry and Analytics of Cosmetics -> Department of Analytical Chemistry -> Faculty of Chemistry -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Dariusz Wyrzykowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	0.0	0.0	30
	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	30		4.0		16.0	50
Subject objectives	• presentation of basic issues in the field of physical chemistry of cosmetic products • presentation of the basics of physical chemistry calculations • familiarising students with basic and more advanced aspects of testing the physical chemistry properties of cosmetics • familiarising students with commonly used experimental methods and data processing						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[CHEMMU2_W03] Demonstrates extended knowledge in the field of modern measuring techniques used in chemical analysis.		explains in detail the relationships between the structure of matter and its observed properties		[SW1] wypowiedź ustna/rozmowa/dyskusja [SW2] prezentacja/projekt/referat/raport		
	[CHEMMU2_U02] Critically assesses the results of conducted, performed observations and theoretical calculations and discusses errors.		performs analyses using experimental methods and formulates conclusions based on them		[SU2] prezentacja/projekt/referat/raport		
	[CHEMMU2_W05] Has extended knowledge in the field of the specialisation studied.		has advanced knowledge in the field of chemical specialisation studied		[SW2] prezentacja/projekt/referat/raport		
	[CHEMMU2_U01] Plans and implements chemical experiments of medium complexity.		identifies, analyses and solves problems in the field of chemistry in the broad sense based on acquired knowledge		[SU2] prezentacja/projekt/referat/raport [SU5] realizacja zadania problemowego		
	[CHEMMU2_K02] Is able to undertake a variety of roles in the team, including supervisory ones.		works independently, demonstrating initiative and autonomy, and cooperates within a team, taking on various roles		[SK1] wypowiedź ustna/rozmowa/dyskusja [SK8] obserwacja samodzielnej lub zespołowej pracy studenta		

Subject contents	The set of physicochemical experiments includes 6 to 10 laboratory classes focusing on the study of the properties of cosmetic products. The course aims to familiarize students with commonly used experimental methods, such as potentiometry, conductometry, and spectrophotometry, used in the physicochemical analysis of cosmetics. During the classes, students will also learn how to perform calculations and present the results obtained.		
Prerequisites and co-requisites	Before starting the course, students should have basic knowledge of analytical chemistry, instrumental chemistry, and physical chemistry.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		51.0%	40.0%
		51.0%	60.0%
Recommended reading	Basic literature	Minczewski, Marczenko, Chemia analityczna Tom 1. Podstawy teoretyczne i analiza jakościowa. PWN Minczewski, Marczenko, Chemia analityczna Tom 2 Chemiczne metody analizy ilościowej. PWN	
	Supplementary literature	none	
	eResources addresses		
Example issues/ example questions/ tasks being completed	none		
Work placement	Not applicable		

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