



Subject card

Subject name and code	Basics of Cosmetics Production and Testing, PG_00060884						
Field of study	Podstawy produkcji i badania kosmetyków						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group		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		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Biotechnology and Microbiology -> Faculty of Chemistry -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Adam Macierzanka				
	Teachers		dr hab. inż. Patrycja Szumała				
			dr hab. inż. Adam Macierzanka				
			dr inż. Aneta Pacyna-Kuchta				
			dr inż. Ilona Kłosowska-Chomiczewska				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	0.0	30
	E-learning hours included: 0.0						
	eNauczanie source address: https://pg.edu.pl/2025/course/view.php?id=2683						
	Moodle ID: 2683 Podstawy produkcji i badania kosmetyków 2025/26 https://enauczanie.pg.edu.pl/2025/course/view.php?id=2683						
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		5.0		40.0	75
Subject objectives	Gaining knowledge of the technology of preparation, composition, analysis and the use of various groups of cosmetic products.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_U09] has the ability to analyze fatty raw materials and their use in chemical products and the development of various forms of cosmetic preparations, recognizes systemic and non-technical aspects in the evaluation of their properties	The student has the ability to analyze fatty raw materials and their use in chemical industry products and create various forms of cosmetic preparations, sees systemic and non-technical aspects in the assessment of their properties.	[SU5] Ocena umiejętności zaprezentowania wyników realizacji zadania [SU4] Ocena umiejętności korzystania z metod i narzędzi [SU3] Ocena umiejętności wykorzystania wiedzy uzyskanej w ramach przedmiotu [SU2] Ocena umiejętności analizy informacji
	[K6_W08] has knowledge of raw materials and products in cosmetics, fat chemistry and technology, knows the technology of obtaining cosmetic products and methods of assessing their properties	The student has an organized knowledge of the chemistry and technology of fats, knows the technology of production of cosmetic products and methods for assessing their properties	[SW1] Ocena wiedzy faktograficznej
	[K6_U02] is able to operate typical laboratory apparatus and conduct analyses related to materials testing	The student has acquired the skills to use laboratory equipment and analytical procedures required to carry out basic material analyses of cosmetic raw materials and products.	[SU4] Ocena umiejętności korzystania z metod i narzędzi [SU3] Ocena umiejętności wykorzystania wiedzy uzyskanej w ramach przedmiotu [SU2] Ocena umiejętności analizy informacji
Subject contents	Course content – lecture Structure and function of human skin. Compounds reported to increase the skin barrier. Types of cosmetic products and their effects. Materials used in cosmetics and criteria of their selection, with particular emphasis on biologically active materials. Cosmetic emulsions and their structure and stabilization methods. The surfactants in cosmetics. The technology for producing various types of cosmetic emulsions. Haircare: shampoos, conditioners, conditioning cosmetics. Make-up cosmetics. Powders, shadows, mascaras, lipstick, etc. Technology of perfume products. Technology of deodorants. Regulations concerning cosmetic materials and cosmetic products. Course content – laboratory The laboratory classes are divided into several practical exercises that allow students to apply the knowledge gained during lectures to produce model cosmetic products: a body wash, a cosmetic emulsion, a cleansing liquid, a face mask, a scrub, and a colour cosmetic. These products are manufactured on the basis of formulations and recipes prepared specifically for the laboratory classes.		
Prerequisites and co-requisites	Basic knowledge of organic chemistry and selected analytical methods.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Laboratory	100.0%	40.0%
	Written exam	50.0%	60.0%
Recommended reading	Basic literature	1. J. Marcinkiewicz - Salmonowiczowa, Zarys chemii i technologii kosmetyków, Wyd. Politechniki Gdańskiej, Gdańsk, 1995. 2. W.S. Brud, R. Glinka, Technologia Kosmetyków, Oficyna Wydawnicza, Łódź, 2001. 3. M.M. Rieger, Surfactants in Cosmetics, M. Dekker, Inc. New York, 1985. 4. L. Ho Tan Tai, Formulating Detergents and Personal Care Products, AOCS Press, Champaign, 2000. 5. Analysis of Cosmetic Products, ed. A. Salvador, A.Chisvert, Elsevier, Amsterdam, 2007.	
	Supplementary literature	6. J. Przondo, Związki powierzchniowo czynne i ich zastosowanie w produktach chemii gospodarczej, Wydawnictwo Politechniki Radomskiej, 2007. 7. K. Gawrońska, K. Kacprzak, Chemia kosmetyczna: ćwiczenia laboratoryjne; UAM, Warszawa 2008. 8. R. Glinka, M. Glinka; Receptura kosmetyczna z elementami kosmetologii: tom 1; Oficyna Wydawnicza MA, Łódź, 2008	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Those will be directly related to the topics described above in the "Class structure" section.		
Practical activities within the subject	Not applicable		

Document generated electronically. Does not require a seal or signature.