GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Cosmetic Innovations, PG_00064326		
Field of study	Chemical Technology		
Date of commencement of studies	February 2026	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Optional subject group Specialty 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
Semester of study	2	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 inż. Ilona Kłosowska-Chomiczewska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	30.0	15.0	45

E-learning hours included: 0.0

eNauczanie source address: https://enauczanie.pg.edu.pl/2025/course/view.php?id=1361

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	45	5.0	25.0	75

Subject objectives

The aim of the course is to prepare students to independently design prototypes of simple products in the field of cosmetic and cosmeceutical technology, with particular emphasis on product innovation including the selection of raw materials, manufacturing technologies, and the resulting microstructure of the cosmetic product. The course also highlights environmental aspects and guides students in preparing preliminary materials required for a patent application or a know-how description.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_K01] critically evaluates the content of cognitive and practical problems	The student is aware of the social and professional responsibility associated with the design of simple cosmetic product prototypes, understands the importance of safe and ethical application of technological knowledge relevant to the specialization, and demonstrates readiness to take into account quality, health, and environmental requirements in product development activities.	[SK5] Assessment of ability to solve problems that arise in practice
[K7_W02] selects appropriate apparatus and materials for the manufacture and processing of consumer goods	he student has knowledge of the methodologies for manufacturing selected cosmetic products, as well as the requirements for the selection of equipment and materials necessary to prepare the workplace.	[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects
[K7_U08] assesses the potential for commercialisation of a product or technology based on an analysis of scientific publications and patents	The student is able to assess the commercialization potential of a product or technology based on the analysis of scientific publications and patents.	[SU2] Assessment of ability to analyse information

<table>
<tr><td>Subject contents</td><td>Course content – project
Design of innovative products and their trademarks (logos), preparation of a review of the state of technology based on scientific publications and patents, including a statement justifying the introduction of the innovation; development of the steps for prototype creation or production/synthesis process; description of necessary raw materials and methods for testing and evaluating the prototype; preparation of a mini business plan considering raw material costs and competing products on the market; and preparation of a patent application manuscript or a know-how description.

Course content – seminar
Seminars discuss cosmetic trends. Cross-industry inspirations are explored. Selected cosmetic patents are analyzed. Pitching skills are trained. Projects are presented as classic, patent and pitch formats.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Basic knowledge in the field of cosmetic chemistry and technology</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Group activity</td><td>60.0%</td><td>20.0%</td></tr>
<tr><td>Partial reports</td><td>60.0%</td><td>30.0%</td></tr>
<tr><td>Final presentation</td><td>60.0%</td><td>50.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Baki, Gabriella. Introduction to cosmetic formulation and technology. John Wiley & Sons, 2022.
Sakamoto, Kazutami, et al., eds. Cosmetic science and technology: theoretical principles and applications. Elsevier, 2017.</td></tr>
<tr><td>Supplementary literature</td><td>Barel, André O., Marc Paye, and Howard I. Maibach, eds. Handbook of cosmetic science and technology. CRC press, 2014.

Schueller, Randy, and Perry Romanowski. Beginning cosmetic chemistry: an overview for chemists, formulators, suppliers and others interested in the cosmetic industry. Allured, 1999.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>Development of an innovative solution, preparation of a prototype, or improvement of existing technologies in the field of cosmetic chemistry and technology, as well as functional additives for cosmetic products.</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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