



Lodz University
of Technology

Study programme

Faculty:	Faculty of Biotechnology and Food Sciences
Major:	Cosmetics Technology
Level of study:	second-cycle programme (magister)
Form of study:	full-time studies
Academic year:	2026/27

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Basic information

Name of the field of study:	Cosmetics Technology
Level of study:	second-cycle programme (magister)
Study profile:	practical
Form of studies:	full-time studies
Duration of studies (number of semesters):	3
The number of ECTS points required to complete studies:	90
Total number of hours of classes:	1125
The number of ECTS points a student obtains as part of classes conducted with the direct participation of academic teachers or other persons conducting classes:	45
Professional title awarded to graduates:	magister
ISCED code:	0729
Language of study:	polish

Assigning the course to the disciplines to which the learning outcomes relate

Discipline	Percentage share
Food technology and nutrition	80%
Chemical engineering	20%

Learning outcomes (in relation to the PQF)

No.	Learning outcome code	Learning Outcome Content	Reference to the universal characteristics of the first level of PRK	Reference to the second-level characteristics of the PRK, taking into account the second-level characteristics enabling the acquisition of engineering competences
1	2TKO1	knows and understands in depth the key and detailed issues in the field of technology, cosmetics and food analysis, as well as their practical applications in professional activities.	P7U_W	P7S_WG
2	2TKO10	is ready, thinking and acting in an entrepreneurial manner, to responsibly develop professional achievements and professional ethics, as well as to initiate and implement innovations and promote a culture of quality, compliance, and transparency, in accordance with changing conditions and social needs.	P7U_K	P7S_KO, P7S_KR
3	2TKO2	knows and understands the principles of applying sustainable technologies in the production, analysis, quality control, and distribution of cosmetics, as well as the processes of disposal, recycling, and biodegradation of waste in the cosmetics industry in the context of the product life cycle and environmental protection.	P7U_W	P7S_WK
4	2TKO3	knows the economic, legal, ethical, and environmental conditions of activities related to cosmetic technology, as well as the principles of intellectual property protection, and the basic principles of creating and developing various forms of entrepreneurship in the cosmetic and food industries.	P7U_W	P7S_WK
5	2TKO4	is able to use the knowledge they possess to identify, formulate, and innovatively solve complex problems in cosmetic technology, as well as to formulate hypotheses and select strategies for their verification using advanced methods and tools, including information and communication technologies.	P7U_U	P7S_UW
6	2TKO5	is able to critically analyze existing solutions and tools, as well as to adapt and develop new methods for designing systems, processes, and operational procedures, quality control and validation plans within the production and distribution chain of raw materials and finished products, while taking into account legal, economic, ethical, and environmental aspects.	P7U_U	P7S_UW
7	2TKO6	is able to plan and conduct experiments, design studies, perform computational analyses and validate results, as well as communicate technical conclusions in the form of reports and presentations.	P7U_U	P7S_UK
8	2TKO7	is able to function effectively in teams, including interdisciplinary ones, and to lead them. Takes on the role of a leader in setting goals, planning and coordinating tasks, and collaborates within the team. Can communicate with both internal and external environments, using specialized terminology, also in a foreign language in accordance with the requirements specified for the B2+ level of the Common European Framework of Reference for Languages.	P7U_U	P7S_UK, P7S_UO
9	2TKO8	is able to independently plan and carry out their own lifelong learning and inspire the development of others.	P7U_U	P7S_UU

No.	Learning outcome code	Learning Outcome Content	Reference to the universal characteristics of the first level of PRK	Reference to the second-level characteristics of the PRK, taking into account the second-level characteristics enabling the acquisition of engineering competences
10	2TKO9	is prepared for critical assessment, recognizing the significance and responsible use of knowledge in solving technological, cognitive, and practical problems. They are ready to seek expert opinions and rely on scientific evidence as well as regulatory requirements. They are prepared to initiate and organize activities for the benefit of the social environment and public interest, including consumer education, responsible risk communication, and the promotion of sustainable and ethical practices in the economy.	P7U_K	P7S_KK, P7S_KR

Matrix of course modules in relation to learning outcomes and curriculum content

No.	Course name	Program content	2TK01	2TK010	2TK02	2TK03	2TK04	2TK05	2TK06	2TK07	2TK08	2TK09
1	Practical basics of cosmetic chemistry	Basic and practical issues of general, inorganic, and organic chemistry in the context of cosmetic technology. Laboratory classes focus on preparing solutions, determining physicochemical parameters, identifying inorganic and organic compounds, studying the properties of surfactants and emulsifiers, and assessing the stability of simple cosmetic formulations.	x				x		x			x
2	Bioactive raw materials in health-promoting and care products	Bioactive raw materials of cosmetic and food importance: water and other solvents, lipids, sugars, proteins, glycosides, antioxidants, mineral and silicone oils, synthetic emollients, humectants, rheology modifiers, fragrances, preservatives, UV filters, dyes and pearlescent pigments, extracts, vitamins and antioxidants, bee products, and others. Structure of the skin and appendages, and pathways for the penetration of active substances.	x		x		x				x	
3	Innovations in cosmetic industry	Current directions in the development of the cosmetics industry: product innovations, modern sales models, and communication based on soft power. Use of direct marketing tools, social media, subscription models, and profiling, also in creating personalized formulations. Global and local trends regarding raw materials and ingredients sourced from waste in accordance with sustainable development principles. The project is conducted using the CBL method, based on solving real industry challenges.		x		x						x
4	Microbiology of cosmetics	General microbiology topics; groups of microorganisms posing a threat in cosmetic production; principles of ensuring microbiological safety of cosmetics, including the analysis of raw materials, production environment, and final product; evaluation of the effectiveness of preservatives. As part of the project, analysis of microbiological hazards using a model cosmetic production line as an example.	x					x				x
5	Impact of cosmetics on human skin microbiota	The skin microbiome - what it is, what it depends on, what affects it. The individual formation of the microbiome and its functions. Microbes living on the skin and skin diseases. Microscopic observations of permanent preparations of skin and other organs. Microbiological examination of skin cleanliness. The correlation between cosmetic formulations with an emphasis on preservative systems and the state of the human skin microbiota. Types and legal regulations regarding preservatives, and the ability to select preservative systems to ensure the microbiological safety of the designed cosmetic while respecting the state of the microbiota.	x					x	x			x
6	Legislation and certification of cosmetic products	Practical analysis of legal regulations concerning the composition, safety, toxicology, labeling, and market introduction of cosmetics will be conducted, including an assessment of product compliance with the applicable legislation. Requirement of European certification bodies for natural cosmetics.		x		x						x
7	Quality control of cosmetic raw materials and cosmetics	Assessment of the quality and safety of raw materials and finished cosmetic products in the light of cosmetic law regulations. Analytical methods used for the identification, purity assessment, and composition control of cosmetic raw materials. Procedures for testing product stability and analyzing the compliance of composition and properties with the manufacturer's declaration. Principles of quality control at stages of the technological process, documenting results, and elements of analytical method validation. Methods for interpreting test results, risk assessment, and verifying product compliance with cosmetic safety requirements.	x			x			x	x		

No.	Course name	Program content	2TK01	2TK010	2TK02	2TK03	2TK04	2TK05	2TK06	2TK07	2TK08	2TK09
8	Processes and equipment in the cosmetics industry	Basic unit processes in cosmetic and food industries. Characteristics of specialized apparatus and equipment used in the cosmetic and food industries. Production technology for single-phase and two-phase preparations and quality control of these products.			x		x	x			x	
9	Foreign Language for Specialist Purposes	Features and structure of scientific publications; specialised text analysis. Presentation and interpretation of research results and statistical data in the form of tables, charts, etc. Development of language skills in the field of specialist vocabulary related to cosmetics technology and grammar necessary for writing scientific/specialist texts and preparing and delivering presentations in a foreign language. Development of teamwork skills using project-based learning.							x	x	x	x
10	Internship 1.1	A six weeks internship in a cosmetics or food production facility. The internship includes: designing and modifying product recipes, and/or process observation and mapping, and/or identifying HACCC points, and/or modifying the recipe/process and assessing the impact on quality characteristics.					x		x			x
11	Household chemical products technology	Characteristics of the household products industry, formulation of dishwashing products, hand washing formulations, windows cleaning products, fabric rinsing products, products for hard surfaces lightduty and heavyduty types.	x		x		x		x			
12	Sustainable technologies for cosmetic and food production	Definitions: sustainable production, green chemistry. EU regulations on sustainable development. Selection of raw materials and use of agri-food waste. Sustainable process technologies. Product life cycle assessment. Circular economy. Project on developing a prototype of a sustainable cosmetic or food product.		x	x			x				
13	Cosmetic brand development strategies and consumer behavior	Psychological, sociological, and market determinants of consumer decisions, as well as the principles of building and communicating a cosmetics brand. Purchasing, cultural, and social mechanisms influencing product choices. Creating a brand strategy based on market analysis, audience segmentation, and value creation. Creating a new brand – from competitor analysis, packaging and label design according to requirements, through formulation and cost estimation, to developing an advertising campaign along with documentation in laboratory conditions.		x		x		x				
14	Waste degradation and disposal in cosmetic and food industry	Types of waste in the cosmetics and food industries. Hazardous waste. Biological, chemical, and physical methods of waste degradation and disposal. Treatment of industrial wastewater. Circular economy in the cosmetics and food industry. Laboratory: analysis of by-products and waste, biodegradation processes, advanced chemical and microbiological processes, waste upcycling, management and processing of packaging, wastewater treatment.			x		x	x	x			
15	Innovations, patents, and transfer of knowledge	Concepts: technology, innovation, implementation, commercialization. Technology transfer models. Options for acquiring technology. The concept of innovation in the cosmetics industry, sources and types of innovation. Innovation indicators. Industrial property rights. Criteria for preparing a patent. Patent documentation, its description, and claims. Protection of know-how and trade secrets in the cosmetics industry. Overview of key patenting areas in cosmetics. The role of technology transfer centers - company technology strategy. Commercialization of research results - from idea to implementation, innovation assessment, business models for cosmetic technologies. Basics of implementation financing. Preparation of complete documentation for a cosmetic or technological innovation.				x	x			x		

No.	Course name	Program content	2TK01	2TK010	2TK02	2TK03	2TK04	2TK05	2TK06	2TK07	2TK08	2TK09
16	Internship 1.2	A six weeks internship at cosmetics or food production facilities, research laboratories, and companies providing technical consulting services for cosmetic products. The internship includes: quality control and/or technical consulting, working with SOPs, sample preparation, calibration of basic equipment (pH meter, viscometer, scales), and/or performing a series of tests according to specifications, and/or developing a control chart and recommendations for the process, and/or participating in packaging and label inspections.						x	x	x		
17	Cosmeceuticals and nutraceuticals	Cosmeceuticals and nutraceuticals - definitions, trends, and criteria distinguishing them from drugs, taking into account the risk of overinterpreting claims and the characteristics of key active substances. Analysis of methods for delivering ingredients, evaluating their effectiveness, bioavailability, and safety. Relationships between diet, supplementation, and the condition of skin, hair, and nails. Introduction to nanotechnology in cosmetics and food, as well as the role of nanomaterials in improving stability and bioavailability. The project includes developing the concept of using nanostructures in cosmetic or food formulations and balancing the diet for selected skin issues.	x					x		x		x
18	Advances in microbiological analysis of production environments	Alternative methods for detecting selected pathogenic bacteria in food and microorganisms posing a threat in cosmetics production. Detection of microorganisms based on flow cytometry, fluorescent in situ hybridisation (FISH), MALDI-TOF MS, the Biolog system and PCR. The latest antibiofilm strategies: inhibiting biofilm formation and removing mature biofilms. Monitoring biofilm formation using conventional culture methods and alternative techniques.	x				x		x	x		
19	Cosmetics technology and formulation	Designing and manufacturing cosmetics, taking into account the product's intended use and performance profiling, raw material selection, market analysis for a given product, and appropriate production technologies. Integrating classical technological principles with modern methods—including AI tools—to optimize the sensory, functional, and stability properties of formulations. Scaling production. Good manufacturing practice - GMP principles. Developing skills in creative formulation design, technological thinking, and identifying innovative solutions.	x				x			x		
20	Case study in cosmetic industry	Overview of case studies as a research and teaching method facilitating in-depth analysis of phenomena, processes, and problems in their real-world context. Principles of preparation of a proper case study, including potential errors. Analytical tools supporting the research process most commonly used in case studies, their theoretical assumptions and practical applications, along with a comparison of their advantages and limitations. Analysis of particular situations, problems, or successes using the example of one or more companies from the cosmetics industry, carried out in accordance with the correct research structure.								x	x	x
21	Colloidal technologies in cosmetics and food	Colloids: definition, classification, and characteristics of colloidal systems used in cosmetics and food. Methods of obtaining colloidal systems and their physicochemical properties. Techniques for determining the physicochemical parameters of colloidal systems. Phenomena leading to the destabilization of colloidal systems and factors affecting their stability. The use of instrumental methods for the quantitative description of physicochemical properties and the durability of colloidal systems. Project - development and evaluation of the physicochemical properties and stability of a selected colloidal system.	x					x	x			
22	Diploma Seminar	Preparation for the competency exam, including a mock exam in the form of a case study and discussion of its results. Analysis of the current state of knowledge in the field of the thesis topic, presentation of the research schedule and applied analytical methods, discussion and review of the obtained research results.							x	x		x

No.	Course name	Program content	2TK01	2TK010	2TK02	2TK03	2TK04	2TK05	2TK06	2TK07	2TK08	2TK09
23	Internships 2.1	A six weeks internship at a cosmetics production facility. The internship covers topics related to designing and modifying cosmetics formulas.	x				x	x	x			
24	Internships 2.2	A six weeks internship at cosmetics production facilities, research laboratories, and technical consulting firms for cosmetic products. The internship covers issues related to quality control and/or technical consulting.						x		x		x
25	Final Project	Analysis of the current state of knowledge in the field of the thesis topic. Developing the concept of the thesis, formulating the main objective and scope of the work. Conducting research and processing the research results. Preparing the content of the master's thesis in accordance with the supervisor's guidelines.	x				x		x			

ECTS - subjects

No.	Course name	ECTS	Subjects in the field of humanities and social sciences	Elective subjects	Profile items	Classes in a foreign language
1	Practical basics of cosmetic chemistry	6		6	6	
2	Bioactive raw materials in health-promoting and care products	7			7	
3	Innovations in cosmetic industry	6		6	6	
4	Microbiology of cosmetics	6			6	
5	Impact of cosmetics on human skin microbiota	6		6	6	
6	Legislation and certification of cosmetic products	2			2	
7	Quality control of cosmetic raw materials and cosmetics	4			4	
8	Processes and equipment in the cosmetics industry	3			3	
9	Foreign Language for Specialist Purposes	2				
10	Internship 1.1	6		6		
11	Household chemical products technology	5		5	5	
12	Sustainable technologies for cosmetic and food production	4		4	4	4
13	Cosmetic brand development strategies and consumer behavior	5	5		5	
14	Waste degradation and disposal in cosmetic and food industry	4		4	4	4
15	Innovations, patents, and transfer of knowledge	2			2	
16	Internship 1.2	6		6		
17	Cosmeceutics and nutraceuticals	5		5	5	
18	Advances in microbiological analysis of production environments	5		5	5	
19	Cosmetics technology and formulation	6			6	
20	Case study in cosmetic industry	5		5	5	
21	Colloidal technologies in cosmetics and food	2			2	

No.	Course name	ECTS	Subjects in the field of humanities and social sciences	Elective subjects	Profile items	Classes in a foreign language
22	Diploma Seminar	4				
23	Internships 2.1	6		6		
24	Internships 2.2	6		6		
25	Final Project	20		20		

ECTS indicators

Name	Value
The total number of ECTS credits that a student must obtain through elective courses (amounting to no less than 30% of the total ECTS credits required to obtain the qualification corresponding to the given level of study)	47/90 (52.22%)
The total number of ECTS credits to be earned by a student through courses in the fields of humanities or social sciences	5
The total number of ECTS credits that a student must obtain from courses developing practical skills, amounting to more than 50% of the total ECTS credits required to graduate from a given level of study	0/90 (0%)

Methods of verifying and assessing learning outcomes

Verification of achieved learning outcomes requires the use of diverse forms of student assessment, appropriate to the categories of knowledge, skills, and social competencies to which these outcomes relate. The selection of suitable tools also depends on the specifics of the subject and the form of classes, and is described in the syllabi of individual courses. The achievement of the required learning outcomes is verified through:

1. Written work (exams, tests, reports, essays, projects, posters, thesis, etc.);
2. Oral statements (oral knowledge checks, public presentations such as delivering a paper, presentation, etc.);
3. Practical and/or project tasks (both group and individual);
4. Observation and evaluation of student activity during classes;
5. Self-assessment and peer assessment (especially in the case of group projects);
6. Competency exam and diploma exam.

Verification may be formative (partial, repeated during classes) and/or summative (final assessment). The final verification result is given according to the currently applicable grading scale.

The course coordinator or instructor is obliged, during the first class, to discuss the course syllabus and to formulate and provide documented information to students regarding the methods of verification and the conditions for conducting assessments of learning outcomes.

Professional internships

Length: 3 months

ECTS credits earned: 12

Internships completed in accordance with the study program, in a form adapted to the profile and specificity of the field of study, and in accordance with the rules set forth by the faculty and the University.

Characteristics of the course

Graduate profile

A graduate of the Cosmetics Technology programme possesses structured and advanced knowledge in the fields of cosmetic chemistry, microbiology, manufacturing technology, raw material analysis, and the assessment of the quality and safety of cosmetic products. The graduate is familiar with the principles of designing and optimizing cosmetic formulations, the methods used for their evaluation, as well as the legal and regulatory requirements governing the placement of cosmetic products on the market. They demonstrate the ability to select raw materials, develop formulations, conduct technological processes, and perform quality control using both laboratory and industrial equipment. The graduate is capable of preparing and verifying technological and regulatory documentation, and of applying the principles of Good Manufacturing Practice (GMP), as well as safety and sustainability standards.

The graduate is prepared for employment in companies engaged in the production of cosmetics and cosmetic raw materials, in research and development laboratories, quality control units, and in regulatory, technological, and production departments, as well as in consulting entities and organizations within the chemical and pharmaceutical sectors. They possess the competencies required for effective collaboration within interdisciplinary teams and for the use of the English language in professional documentation and communication. The graduate is prepared to make independent technological decisions, solve complex engineering problems, and pursue further professional and academic development, including postgraduate and doctoral studies, as well as to establish and conduct business activity within the cosmetics sector.

The relationship between the field of study and the university's strategy

The education provided within the Cosmetics Technology programme, delivered by the Faculty of Biotechnology and Food Sciences, is consistent with the mission and the Strategy of Lodz University of Technology for the years 2025–2030, which is oriented towards building a sustainable research university that ensures freedom of research and academic debate, provides modern practice-oriented education, and fosters local and international cooperation for the benefit of society and the economy.

The programme aligns with these objectives through its interdisciplinary curriculum, integrating knowledge from the fields of technical sciences, chemical sciences, biological sciences, and economic sciences, as well as from the disciplines of food technology and nutrition and chemical engineering. The curriculum is designed to provide students with both theoretical knowledge and practical skills related to the design, manufacture, quality analysis, and market placement of cosmetic products, while drawing upon the experience and research infrastructure developed for food technology, particularly in the areas of product safety, quality, stability, and the use of bio-based raw materials.

The connection between the programme and the University's Strategy is further reflected in its use of the research and development potential of the region and in its cooperation with the cosmetics industry and the broadly defined food sector. The programme develops competencies and practical skills essential for collaboration with enterprises engaged in the manufacture, testing, and distribution of cosmetic products, and supports the transfer of knowledge from the field of food technology to the cosmetics sector. In this way, it contributes to the University's strategic objectives related to engagement with the socio-economic environment, innovation, and industry cooperation.

The Cosmetics Technology programme also supports the implementation of the University's strategic goals in the area of sustainability by preparing graduates to design and evaluate cosmetic products with due consideration for consumer safety, legal compliance, and environmental responsibility. The integration of the food technology perspective into the education of specialists in cosmetics technology further strengthens the programme's contribution to the development of sustainable and innovative product solutions, in line with the strategic vision of Lodz University of Technology.

Educational objectives and employment and continuing education opportunities

The objective of the Cosmetics Technology programme is to educate highly qualified professionals for the cosmetics, cosmetic-pharmaceutical, food, and chemical industries, as well as for the service sector. The curriculum integrates advanced practical knowledge in the fields of technology, microbiology, bioactive raw materials, processes and equipment used in cosmetics and food production, as well as product legislation and safety, brand and cosmetics market strategy, innovation, and intellectual property protection. Selected modules are delivered in a format that enables students to address real-world technological problems in cooperation with industry partners. The programme also includes professional internships and the preparation of a diploma thesis related to industry practice.

Graduates of the Cosmetics Technology programme possess the competencies required to work in companies engaged in the design, manufacture, and evaluation of cosmetic products, cosmetic raw materials, chemical products, dermatological and personal care products, as well as food products. They are prepared to supervise technological processes, conduct research and development as well as implementation activities, assess product safety, and ensure their professional application.

Potential employment opportunities include the cosmetics, food, cosmetic-pharmaceutical, and chemical industries; analytical, research and development, and quality control laboratories; as well as companies involved in the distribution of raw materials and semi-finished products. The competencies acquired during the course of study also enable graduates to establish and operate their own business activity within the small and medium-sized enterprise (SME) sector.

Graduates may further pursue their professional and academic development through postgraduate programmes, specialist training courses, and doctoral studies in areas related to cosmetics and food technology, safety assessment, production management, marketing, biotechnology, health sciences, and related fields.

Description of the process and outcome of consultations on the proposed study program with the socio-economic environment

The process of modifying the Cosmetics Technology study programme was preceded by extensive consultations with representatives of the cosmetics industry, including members of the Business Council operating at the Faculty of Biotechnology and Food Sciences of Lodz University of Technology. The study involved both large enterprises, such as Dr Irena Eris S.A. and Dax Cosmetics Sp. z o.o., as well as smaller specialized companies, including Oilmedica, Indigo Nails, MAGA Cosmetics, and manufacturers of natural cosmetics. The consultations comprised surveys, job market analyses, and direct interviews with industry practitioners.

Employers unequivocally confirmed the demand for graduates of the programme and expressed their willingness to offer internship placements. They emphasized the need to develop competencies in formulation design, conducting physicochemical and organoleptic analyses, and possessing a solid understanding of skin structure and the mechanisms underlying dermatoses. Companies also highlighted the importance of soft skills, such as independence, responsibility, teamwork, flexibility, and readiness to learn and adapt to new technologies.

The analysis of the feedback received indicates that, in addition to discipline-specific knowledge, graduates should develop skills in project management, critical thinking, and coping effectively in situations requiring resilience to stress. Attention was drawn to the necessity of monitoring market trends and using modern tools, including artificial intelligence-based solutions, which are increasingly supporting laboratory work. Companies also recommended the introduction of courses related to emerging technologies, bioprocesses, and comprehensive product design—from concept development and marketing aspects to packaging.

Employers consistently pointed to the need to increase the number of practical classes and opportunities to work with modern laboratory equipment, enabling students to independently perform technological processes. They also emphasized the value of workshops supporting self-assessment and conscious career path planning.

As a result of the consultations, industry representatives recommended incorporating into the curriculum content related to:

- modern cosmetic technologies and product design,
- presentation and self-presentation techniques,
- project management and cost analysis,
- industry-specific English language training.

Members of the Business Council actively participated in the process of revising the Cosmetics Technology programme, identifying key competencies in the areas of knowledge, skills, and social competences required of its graduates.

The conclusions drawn from the input of the socio-economic environment have been incorporated into the revised curriculum. Particular emphasis has been placed on practical training, the development of digital and interpersonal competences, and the inclusion of content reflecting current industry trends. As a result, graduates will be better prepared to work in the dynamically evolving cosmetics and food sectors.

Description of competencies expected from a candidate applying for admission to studies

In accordance with the recruitment resolution in force for a given academic year.

The unit organizing education

Faculty of Biotechnology and Food Sciences

Education program

Semester 1

Course	Number of hours	ECTS points	Form of verification	Obligatory
Bioactive raw materials in health-promoting and care products	Laboratory classes: 10 Project work: 30 Lecture: 15 E-learning: 6	7	Exam	Obligatory
Microbiology of cosmetics	Laboratory classes: 30 Project work: 10 Lecture: 18 E-learning: 7	6	Exam	Obligatory
Legislation and certification of cosmetic products	Project work: 20 E-learning: 6	2	Graded assignment	Obligatory
Quality control of cosmetic raw materials and cosmetics	Laboratory classes: 45 Lecture: 15	4	Graded assignment	Obligatory
Processes and equipment in the cosmetics industry	Project work: 15 Lecture: 10 E-learning: 8	3	Graded assignment	Obligatory
Foreign Language for Specialist Purposes	Tutorials: 45	2	Graded assignment	Obligatory
Elective Courses 1		6	Graded assignment	Obligatory group
The student chooses 1 subject				
Practical basics of cosmetic chemistry	Laboratory classes: 60	6	Graded assignment	Optional
Innovations in cosmetic industry	Project work: 60	6	Graded assignment	Optional
Impact of cosmetics on human skin microbiota	Laboratory classes: 30 Project work: 30	6	Graded assignment	Optional
Sum	350	30		

Semester 2

Course	Number of hours	ECTS points	Form of verification	Obligatory
Cosmetic brand development strategies and consumer behavior	Laboratory classes: 15 Project work: 60 E-learning: 10	5	Graded assignment	Obligatory
Innovations, patents, and transfer of knowledge	Project work: 15 Lecture: 10 E-learning: 5	2	Graded assignment	Obligatory
Cosmetics technology and formulation	Laboratory classes: 60 Project work: 15 Lecture: 30	6	Exam	Obligatory
Colloidal technologies in cosmetics and food	Laboratory classes: 30 Project work: 15	2	Graded assignment	Obligatory
Obieralne praktyki studenckie 1		6	Pass	Obligatory group
The student chooses 1 subject				
Internship 1.1	Internship: 0	6	Pass	Optional
Internship 1.2	Internship: 0	6	Pass	Optional
Elective Courses 2		4	Graded assignment	Obligatory group
The student chooses 1 subject				
Sustainable technologies for cosmetic and food production	Project work: 30 Lecture: 10	4	Graded assignment	Optional
Waste degradation and disposal in cosmetic and food industry	Laboratory classes: 30 Lecture: 10	4	Graded assignment	Optional
Elective Courses 3		5	Graded assignment	Obligatory group
The student chooses 1 subject				
Household chemical products technology	Laboratory classes: 45	5	Graded assignment	Optional
Cosmeceutics and nutraceuticals	Project work: 45	5	Graded assignment	Optional

Course	Number of hours	ECTS points	Form of verification	Obligatory
Advances in microbiological analysis of production environments	Laboratory classes: 30 Lecture: 15	5	Graded assignment	Optional
Case study in cosmetic industry	Project work: 45	5	Graded assignment	Optional
Sum	350	30		

Semester 3

Course	Number of hours	ECTS points	Form of verification	Obligatory
Diploma Seminar	Seminar: 60	4	Graded assignment + exam	Obligatory
Obieralne praktyki studenckie 2		6	Pass	Obligatory group
The student chooses 1 subject				
Internships 2.1	Internship: 0	6	Pass	Optional
Internships 2.2	Internship: 0	6	Pass	Optional
Final Project	Diploma Thesis: 0	20	Pass	Obligatory subjects to choose from
Sum	60	30		