



## Syllabus for discipline «TECHNOLOGY OF MEDICINAL COSMETICS»

<b>1. General information</b>	
<b>Faculty</b>	Pharmacy
<b>Educational program</b>	22 Healthcare, 226 Pharmacy, 2 <sup>nd</sup> (master's) level of higher education, full-time study
<b>Educational discipline, code</b>	Pharmaceutical biotechnology, OK 41 <a href="http://new.meduniv.lviv.ua/">http://new.meduniv.lviv.ua/</a>
<b>Department</b>	Department of Drug Technology and Biopharmaceutics; 79010, Lviv, Pekarska str.,75 (032) 276-85-84, (032) 276-85-98, Kaf_biopharm@ meduniv.lviv.ua
<b>Head of the deparatment</b>	Bilous Svitlana Bohdanivna, DSci, assoc. prof. svitlana.bilous@gmail.com
<b>Academic year</b>	5 <sup>th</sup>
<b>Semester</b>	9 <sup>th</sup>
<b>Type of discipline</b>	obligatory
<b>Educators</b>	Bilous S. B., DSci, assoc. prof. svitlana.bilous@gmail.com
<b>Erasmus</b>	No
<b>Person responsible for syllabus</b>	Bilous S. B., DSci, assoc. prof. svitlana.bilous@gmail.com
<b>Number of credits ECTS</b>	3 credits ECTS
<b>Number of hours</b>	Total – 90 h: lectures – 8 h; laboratory classes – 30 h; self-educational work – 52 h
<b>Language of study</b>	English
<b>Information on consultations</b>	Consultations are provided in accordance with schedule of consultations by the responsible educators

### 2. A brief review of the discipline

The discipline "Technology of medicinal cosmetics" belongs to the cycle of basic disciplines of professionally oriented training of specialists in the specialty "Pharmacy, industrial pharmacy".

The discipline "Technology of Medicinal Cosmetics" provides theoretical knowledge and develops practical skills on the main stages of formation and development of pharmaceutical technology and cosmetology, modern directions of development of the pharmaceutical industry and professional activity in Ukraine and abroad, requirements for the manufacture of medicinal cosmetics of different pharmaceutical groups in pharmacies and industrial enterprises.

The subject of the discipline the basic provisions and trends of the pharmaceutical industry in Ukraine and other countries, and in particular, the development of modern principles of regulatory documentation and technologies for the production of medicinal cosmetics, which are manufactured in various forms using active substances and excipients permitted for use in cosmetic and medical practices. As well as the use of modern types of equipment for extemporaneous and industrial production in the manufacturing process, both cosmetic and medicinal cosmetics.

### 3. Purpose and objectives of the discipline

**The aim** of discipline "Technology of medicinal cosmetics" is to acquaint students with medicinal cosmetics of different directions, the most common defects and diseases of the skin and its appendages, the principles and methods of their treatment. The knowledge acquired by students will help to provide qualified assistance in choosing rational, effective and safe cosmetics for the prevention and treatment of various defects and diseases of the skin and hair.

**The main tasks** of studying the discipline "Technology of medicinal cosmetics" are:

- coverage of modern requirements for medicinal cosmetics and cosmetic products, medical-biological and theoretical bases of formulations, technology and features of application of medicinal cosmetics of different directions of action, principles of complex cosmetic skin care.

- mastering and analysis of the requirements of current regulations to the organization of production activities and the sale of medicinal cosmetics and cosmetics of various forms of release;

- acquaintance with the organization of production of medicinal cosmetics in the conditions of the pharmaceutical enterprises, according to requirements of Good manufacturing practice (GMP);

- use in professional activity of normative-legal requirements of good manufacturing practice (GMP) and international legal norms concerning the manufacture of medicinal cosmetics by extemporaneous (pharmacy) and industrial methods;

- formation of students' basic knowledge related to: theoretical foundations of manufacturing and appropriate use of various types of dosage and cosmetic forms.

- understanding of the stages of step-by-step control and ways to improve the technology of dosage cosmetic forms under conditions of extemporaneous (pharmacy) and industrial production;

- study of the influence of storage conditions and type of packaging on the stability of medicinal cosmetics;

- study of equipment and devices used in the manufacture of medicinal cosmetics

According to the requirements of the Standard, discipline provides acquisition by students of competencies: general and professional.

#### **General:**

GC 2. Ability to apply knowledge in practical situations.

GC 3. The desire to preserve the environment.

GC 4. Ability to abstract thinking, analysis and synthesis, learn and be modern.

GC 6. Knowledge and understanding of the subject area and understanding of professional activity.

GC 7. Ability to adapt and action in a new situation.

GC 10. The ability to select a communication strategy, the ability to work in a team and experts from other branches of knowledge / types of economic activity.

GC 11. Ability to evaluate and provide quality of work performed.

GC 12. The ability to conduct research at the appropriate level.

#### **Professional:**

PC 1. The ability to carry out sanitary and educational work among the population for the purpose of prevention of common diseases, prevention of dangerous infectious, viral and parasitic diseases, as well as for the purpose of promoting timely detection and support of adherence to the treatment of these diseases according to their medico-biological characteristics and microbiological features.

PC 2. Ability to advise for prescription and non-recipient medicines and other products of pharmacy assortment; Pharmaceutical burns during the choice and implementation of a non-prescription drug by assessing the ratio of risk / benefits, compatibility, indications and contraindications guided by the state of health of a particular patient taking into account biopharmaceutical, pharmacokinetic, pharmacodynamic and physical and chemical characteristics of the medicinal product and other products of pharmacy assortment.

PC 7. Ability to ensure proper storage of medicines and other products of pharmacy assortment in

accordance with their physical and chemical properties and rules of proper storage practice (GSP) in health care facilities.

PC 12. The ability to use in professional activity of knowledge of normative legal, legislative acts of Ukraine and recommendations of proper pharmaceutical practices.

PC 13. The ability to demonstrate and apply in practical activities communicative communication skills, fundamental principles of pharmaceutical ethics and deontology, based on moral obligations and values, ethical standards of professional behavior and responsibility in accordance with the Code of Ethics of Pharmaceutical Workers of Ukraine and WHO guidelines.

PC 14. The ability to organize and carry out the production activities of pharmacies in relation to manufacture of medicinal products in various dosage forms according to doctors' prescriptions and orders of medical institutions, including justification of technology and selection of auxiliary materials in accordance with the rules of Good Pharmacy Practice (GPP).

PC 15. The ability to organize and participate in the production of medicines in the conditions of pharmaceutical enterprises, including the choice and substantiation of the technological process, equipment in accordance with the requirements of proper production practices (GMP) with the relevant development and registration of the necessary documentation. To determine the stability of medicines

PC 18. The ability to develop and implement a system of quality management of pharmaceutical enterprises in accordance with the requirements of applicable standards, to audit the quality and risk management for the quality of pharmaceutical products.

PC 19. The ability to organize and monitor the quality of drugs in accordance with the requirements of the current State Pharmacopoeia of Ukraine and proper practices in pharmacy, to determine methods for sampling for drugs and to standardize in accordance with applicable requirements, preventing the propagation of falsified medicines.

PC 20. The ability to develop methods for controlling the quality of medicinal products, including active pharmaceutical ingredients, medicinal plant raw materials and auxiliary substances using physical, chemical, physico-chemical, biological, microbiological, pharmaco-technological and pharmaco-organoleptic control methods.

#### 4. Prerequisites of the discipline

***"Technology of Medicinal Cosmetics":***

- the discipline based on the set of interrelated disciplines such as: human anatomy and physiology, dermatology, pharmacology, drug technology, pharmacognosy, pharmaceutical chemistry and others;
- the discipline lays the foundations for the training of future specialists, promotes the formation of pharmaceutical and technical thinking;
- together with other pharmaceutical disciplines and social sciences, the discipline plays an important role in providing special training for professional activities.

#### 5. Program learning outcomes

##### List of learning outcomes

Code of learning outcome	Content of learning outcome	Reference to the code of the competency matrix
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\* ***Kn*** – knowledge, ***Ab*** – ability, ***Sk*** – skills, ***C*** – competence, ***AR*** – autonomy and responsibility, ***LO*** – learning outcome

<i>Kn-1</i>	To have specialized conceptual knowledge acquired in the learning process	<i>LO-1, 4, 23</i>
<i>Kn-2</i>	To have deep knowledge of the structure of professional activity	<i>LO -2, 14, 15, 17</i>
<i>Kn-3</i>	To know ways for self-regulation, leading a healthy life	<i>LO -5, 6, 7</i>
<i>Kn-4</i>	To know the tactics and strategies of communication, laws and ways of communicative behavior	<i>LO -8, 9, 12</i>
<i>Kn-5</i>	To have advanced knowledge of native language and basic knowledge of foreign language	<i>LO -8</i>
<i>Kn-6</i>	To have deep knowledge in the field of information and communication technologies used in professional activities	<i>LO -12</i>
	To know the methods of analysis, synthesis and further modern learning	<i>LO -4,6</i>
<i>Kn-7</i>	To know methods for evaluation of work quality	<i>LO -9, 12, 17, 31</i>
<i>Kn -8</i>	To know the responsibilities and ways to accomplish the tasks	<i>LO -1, 22, 24</i>
<i>Kn -9</i>	To know the basics of the legal system and pharmaceutical legislation	<i>LO -3, 5</i>
<i>Kn-10</i>	To know the conditions in healthcare facilities of proper storage of medicines and other products of the pharmacy range in accordance with the physical and chemical properties and the rules of Good Storage Practice (GSP)	<i>LO -24, 25</i>
<i>Kn-11</i>	To know the general principles of the organization of pharmaceutical supply of the population; basic mechanisms of state regulation of pharmaceutical activity	<i>LO -1, 24</i>
<i>Kn-12</i>	To know basic requirements of normative documents (orders, guidelines etc) regulating the development of medicines, preparation of technological documents	<i>LO -1, 9, 25</i>
<i>Kn-13</i>	To know the methods of determining the influence of the nature of excipients on the therapeutic efficacy of drugs by "in vitro" and "in vivo".	<i>LO -27, 31, 32</i>
<i>Sk-1</i>	To be able to solve complex issues and issues that arise in the professional activities	<i>LO -1, 4, 23</i>
<i>Sk -2</i>	Be able to carry out professional activity that requires updating and integrating of knowledge	<i>LO -2, 14, 15, 17</i>
<i>Sk -3</i>	To be able to apply methods of self-regulation, to be able to lead a healthy life and to adapt to new situations of life and activity	<i>LO -5, 6, 7</i>
<i>Sk -4</i>	To be able to choose ways and strategies of communication to ensure effective teamwork	<i>LO -8, 9, 12</i>
<i>Sk -5</i>	To be able to apply knowledge of the native language, both orally and in writing, to be able to communicate in a foreign language	<i>LO -8</i>
<i>Sk -6</i>	To be able to use information and communication technologies in the professional field, which requires updating and integration of knowledge	<i>LO -12</i>
<i>Sk -7</i>	To be able to analyze information, to make informed decisions, to be able to acquire modern knowledge	<i>LO -4,6</i>
<i>Sk -8</i>	To be able to ensure quality performance of the work	<i>LO -9, 12, 17, 31</i>
<i>Sk -9</i>	To be able to set goals and objectives, to be persistent and conscientious in the performance of responsibilities	<i>LO -1, 22, 24</i>
<i>Sk -10</i>	To be able to use laws and other normative documents that regulate pharmaceutical activity in Ukraine and abroad	<i>LO -3, 5</i>
<i>Sk -11</i>	To be able to create conditions in healthcare facilities for proper storage of medicines and other products in accordance with the	<i>LO -12, 24</i>

<i>Sk -12</i>	physical and chemical properties and the rules of Good Storage Practice (GSP) To be able to justify the use of prescription and OTC drug products and other products of the pharmaceutical assortment	<i>LO -14, 17</i>
<i>Sk -13</i>	To be able to apply the basic requirements of regulatory documents (orders, guidelines, etc.) for the development of drug products and design of technological documentation	<i>LO -30,32</i>
<i>C-1</i>	To give the conclusions and explanations clearly and unambiguously to specialists and non-specialists	<i>LO -1, 4, 23</i>
<i>C -2</i>	To form effectively a communication strategy in the professional activities	<i>LO -2, 14, 15, 17</i>
<i>C -3</i>	To establish appropriate connections to achieve results	<i>LO -5, 6, 7</i>
<i>C -4</i>	To use communication strategies and interpersonal interaction skills	<i>LO -8, 9, 12</i>
<i>C -5</i>	To use native language in the professional and business communications and for the preparation of documents	<i>LO -8</i>
<i>C -6</i>	To use foreign language in the professional activities	<i>LO -12</i>
<i>C -7</i>	To use information and communication technologies in the professional activities	<i>LO -4,6</i>
<i>C -8</i>	To establish connections for ensuring the quality work performance	<i>LO -9, 12, 17, 31</i>
<i>C -9</i>	To be able to convey one's public and social position	<i>LO -1, 22, 24</i>
<i>C -10</i>	To use knowledge of laws and other normative documents which regulate pharmaceutical activity in Ukraine and abroad	<i>LO -3, 5</i>
<i>C -11</i>	To carry out a constant monitoring of proper storage of medicines and other products in healthcare facilities in accordance with the physical and chemical properties and the rules of Good Storage Practice (GSP)	<i>LO -24</i>
<i>C -12</i>	To analyze use of prescription and OTC drug products and other products of the pharmaceutical assortment	<i>LO -14, 17</i>
<i>C -13</i>	To choose an optimal technological process for manufacturing drug products in different dosage forms	<i>LO -27</i>
<i>AR-1</i>	To be responsible for making decisions in difficult conditions	<i>LO -2, 6</i>
<i>AR-2</i>	To be responsible for professional development, ability to further professional training with a high level of autonomy	<i>LO -5,7</i>
<i>AR-3</i>	To be responsible for a healthy lifestyle and timely use of self-regulation methods	<i>LO -3</i>
<i>AR-4</i>	To be responsible for the choice and tactics of communication	<i>LO -8, 9, 12</i>
<i>AR-5</i>	To be responsible for fluent knowledge of the native language, and the development of professional knowledge	<i>LO -8, 10</i>
<i>AR-6</i>	To be responsible for the development of professional knowledge and skills	<i>LO -12</i>
<i>AR-7</i>	To be responsible for the timely gaining of modern knowledge	<i>LO -4,6</i>
<i>AR-8</i>	To be responsible for the quality performance of the work	<i>LO -9, 12, 17, 31</i>
<i>AR-9</i>	To be responsible for the quality performance of the tasks	<i>LO -1, 22, 24</i>
<i>AR-10</i>	To be responsible for the personal civil position and activities	<i>LO -3, 5</i>
<i>AR-11</i>	To be responsible for the quality and timely use of normative documents in the professional activities	<i>LO -24</i>
<i>AR-12</i>	To be responsible for the analysis of prescription and OTC drug products and other products of the pharmaceutical assortment	<i>LO -14, 17</i>
<i>AR-13</i>	To be responsible for compliance with Good Manufacturing Practice	<i>LO -27</i>

<b>6. Mode and scope of the discipline</b>			
Forma of the discipline	Full-time study		
Type of activity	Number of hours		Number of groups
lectures	8		
laboratory	30		
seminars	-		
self-educational work	52		
<b>7. Topics and content of the discipline</b>			
Code of activity type	Topic	Learning content	Code of learning outcome
L-1 2 h	Cosmetic products, standardization of their production and safety of use. Skin and its appendages, anatomical and physiological features, cosmetic defects and skin diseases	Cosmetology as a science. Therapeutic and technological aspects of cosmetology. Cosmetics and medicinal cosmetics, their characteristics. Standardization of production and realization of cosmetics in Ukraine and in the world. Sanitary and hygienic examination of cosmetics. Toxicological and hygienic indicators and safety standards for cosmetic products. Certification of cosmetic products. The structure and function of the skin. Skin types, skin care of different types. Methods for determining skin types. Principles of choosing cosmetics for skin care of different types. Structure and functions of skin appendages. Hair types, hair care of different types. Features of nail care. Influence of exogenous and endogenous factors on the condition of the skin. Diseases of the sebaceous and sweat glands. Medicines and medicinal cosmetics for their treatment.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9; C-1, C-2, C-5, C-7, C-9; AR-2, AR-4, AR-6, AR-9</i>
L-2 2 h	Ingredients of cosmetics, principles of cosmetic products compounding. Technology of solid medicinal cosmetics	Ingredients of cosmetics, types of classifications. Natural and synthetic ingredients in cosmetics. Biologically active substances of plant origin as active components of cosmetics. Cosmetological, technological and biopharmaceutical evaluation of certain groups of ingredients. Compositions of cosmetic products depending on skin types. Safety of preservatives,	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>

		surfactants, dyes, UV filters and other ingredients in cosmetics. Factors taken into account when compiling cosmetic formulations. The value of skin type, purpose and dosage form of cosmetics for the selection of components for formulation of cosmetics. Technology of solid medicinal cosmetics. Cosmetic powders. Teas for the treatment of cosmetic skin problems.	
L-3 2 h	Technology of liquid and semi-solid medicinal cosmetics	Technology of liquid cosmetics. Cosmetic lotions and tonics, features of composition and application. Emulsion creams as cosmetic forms and dispersed systems, features of their action on the skin. Excipients that provide physicochemical and microbiological stability of emulsion creams. Technological stages and temperature regimes of production of creams based on emulsions of w/o and o/w types. Fatty creams as dispersed systems, features of their action on the skin. Technological stages of production of fat creams. Massage creams, cosmetic vaseline, features of their composition and application. Oil-free creams, features of their action on the skin. Macromolecular compounds of natural and synthetic origin as components of oil-free creams. Technology and quality assessment of natural and synthetic gels, storage conditions. Suspension creams as dispersed systems, features of their action on the skin. Principles of stabilization of suspension systems. Technological stages of production of suspension creams on different bases. Creams-scrubs and masks, features of their composition and application.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9; C-1, C-2, C-5, C-7, C-9; AR-2, AR-4, AR-6, AR-9</i>
L-4 2 h	Technology of cosmetics for oral cavity care and deodorizing cosmetics. Modern technologies in the production of medicinal cosmetics	Forms of production of cosmetics for oral care, their technology. Nomenclature of active and auxiliary substances that are part of tooth powders, pastes, elixirs and rinses. Classification of deodorizing cosmetics, features of their action. Dosage forms of deodorizing cosmetics, their technology. Characteristics of the main groups of active ingredients in the composition of deodorant cosmetics.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>

Lab-1 3 h	Cosmetics, their classification and characteristics. Standardization of production, criteria of quality and safety of cosmetic products	Cosmetics and medicinal cosmetics, their characteristics. Standardization of cosmetic products and realization of cosmetics in Ukraine and in the world. Sanitary and hygienic examination of cosmetics. Toxicological and hygienic indicators and safety standards for cosmetic products. Certification of cosmetic products.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9; C-1, C-2, C-5, C-7, C-9; AR-2, AR-4, AR-6, AR-9</i>
Lab -2 3 h	Skin, its structure and functions. Skin types, features of care, skin aging, the most common diseases of the skin and its appendages	The structure and function of the skin. Skin types, skin care of different types. Methods for determining skin types. Principles of choosing cosmetics for skin care of different types. Structure and functions of skin appendages. Hair types, hair care of different types. Features of nail care. Influence of exogenous and endogenous factors on the condition of the skin. Modern theories and mechanisms of skin aging. Cosmetics of the group "Anti-aging". Diseases of the sebaceous and sweat glands. Medicines and medicinal cosmetics for their treatment.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9; C-1, C-2, C-5, C-7, C-9; AR-2, AR-4, AR-6, AR-9</i>
Lab -3 3 h	Ingredients of cosmetics, their classification, characteristics and safety of use. Antimicrobial preservatives and surfactants in cosmetics	Ingredients of cosmetics, types of classifications. Natural and synthetic ingredients in cosmetics. Biologically active substances of plant origin as active components of cosmetics. Cosmetological, technological and biopharmaceutical evaluation of certain groups of ingredients. Compositions of cosmetic products depending on skin types. Safety of preservatives, surfactants, dyes, UV filters and other ingredients in cosmetics. Factors taken into account when compiling cosmetic formulations. The value of skin type, purpose and type of dosage form of cosmetics for the selection of components of the formulation. Pharmacological, chemical and physical incompatibility of components.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9; C-1, C-2, C-5, C-7, C-9; AR-2, AR-4, AR-6, AR-9</i>
Lab-4 3 h	Solid medicinal cosmetics, technology, quality control and application	Technology of solid medicinal cosmetics. Cosmetic powders. Teas for the treatment of cosmetic skin problems.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9; C-1, C-2, C-5, C-7, C-9; AR-2, AR-4, AR-6, AR-9</i>



Lab-5 3 h	Liquid medicinal cosmetics, technology, quality control and application	Technology of liquid cosmetics. Cosmetic lotions and tonics, features of composition and application. Forms of production of cosmetics for hair care, features of their action. Principles of choosing shampoos, conditioners and other cosmetics depending on hair type.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9;</i> <i>Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -11;</i> <i>C-1, C-2, K-5, K-7, K-9, K-11;</i> <i>AR-2, AR-4, AR-6, AR-7, AR-9, AR-11</i>
Lab-6 3 h	Semi-solid cosmetics based on emulsions, technology, quality control and application	Emulsion creams as cosmetic forms and dispersed systems, features of their action on the skin. Excipients that provide physicochemical and microbiological stability of emulsion creams. Technological stages and temperature regimes of production of creams based on emulsions of w/o and o/w types.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9;</i> <i>Kn-13;</i> <i>Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13;</i> <i>C-1, C-2, C-5, C-7, C-9, C-11;</i> <i>AR-2, AR-4, AR-6, AR-9, AR-11</i>
Lab-7 3 h	Oily and oil-free creams, technology, quality control and application	Fatty creams as dispersed systems, features of their action on the skin. Technological stages of production of fat creams. Massage creams, cosmetic vaseline, features of their composition and application. Oil-free creams, features of their action on the skin. Macromolecular compounds of natural and synthetic origin as components of oil-free creams. Technology and quality assessment of natural and synthetic gels, storage conditions.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9;</i> <i>Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -11;</i> <i>C-1, C-2, C-5, C-7, C-9, C-11;</i> <i>AR-2, AR-4, AR-6, AR-9, AR-11</i>
Lab-8 3 h	Suspension cosmetics, technology, quality control and application	Suspension creams as dispersed systems, features of their action on the skin. Principles of stabilization of suspension systems. Technological stages of production of suspension creams on different bases. Creams-scrubs and masks, features of their composition and application.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9;</i> <i>Kn-13;</i> <i>Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13;</i> <i>C-1, C-2, C-5, C-7, C-9, C-11;</i> <i>AR-2, AR-4, AR-6, AR-9, AR-11</i>
Lab 9 3 h	Foaming cosmetics, deodorants and antiperspirants, technology, quality control and application	Dosage forms of foaming cosmetics, features of their action on the skin. Technology of soaps, shower gels and other skin cleansers. Classification of deodorizing cosmetics, features of their action. Dosage forms of deodorizing cosmetics, their technology. Characteristics of the main groups of active ingredients in the composition of deodorant cosmetics.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9;</i> <i>Kn-13;</i> <i>Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13;</i> <i>C-1, C-2, C-5, C-7, C-9, C-11;</i> <i>AR-2, AR-4, AR-6, AR-9, AR-11</i>
Lab 10 3 h	Cosmetics for oral cavity care, technology, quality	Forms of production of cosmetics for oral care, their technology. Nomenclature of active and auxiliary	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9;</i> <i>Kn-13;</i>

	control and application	substances that are part of tooth powders, pastes, elixirs and rinses.	<i>Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-1 4 h	The definitions of main terms: “cosmetics”, “cosmetology”, “cosmeceutics”, “cosmetics product”, “medicinal cosmetics”		<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-2 4 h	Standardization of production, registration and certification of cosmetics and medicinal cosmetics		<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-3 3 h	The main regulatory documents on the creation, production and realize of cosmetics and medicinal cosmetics		<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-4 4 h	The most common diseases of the skin and its appendages - etiology, pathogenesis and clinical signs of main diseases		<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-5 3 h	Structure and types of hair, principles of hair care		<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>

S-E-6 3 h	General principles of pharmaceutical care of patients with cosmetic problems	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-7 4 h	The role of skin care in the prevention of skin diseases and its appendages	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-8 3 h	Cosmetic products for protecting the skin from adverse factors (wind, frost, ultraviolet, moisture), features of their composition and application.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-9 3 h	The use of medicinal plant raw materials in the technology of medicinal cosmetics	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-10 3 h	Components of animal origin in the composition of medicinal cosmetics	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-11 4 h	The principle of selection of excipients for the preparation of medicinal cosmetics in the form of various dispersed systems	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6,</i>

		<i>AR-9, AR-11</i>
S-E-12 4 h	Principles of cosmetic procedures - skin cleansing, massage, application of mask, peeling, depilation, etc.	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-13 3 h	Psychological aspects of cosmetology. Cosmetics and the concept of beauty	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-14 3 h	The price situation of cosmetics. Advertising of cosmetics	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>
S-E-15 4 h	The concept of aromology. The use of essential oils in cosmetology	<i>Kn -1, Kn -2, Kn -6, Kn -5, Kn -7, Kn -9; Kn-13; Sk -1, Sk -2, Sk -6, Sk -7, Sk -9, Sk -13; C-1, C-2, C-5, C-7, C-9, C-11; AR-2, AR-4, AR-6, AR-9, AR-11</i>

A multimedia presentation is used during lectures; guides with informative material are used on laboratory classes, a list of literature sources for self-educational work is given.

### **8. Verification of learning outcomes**

#### **Current control**

Code of learning outcome	Code of activity type	Method of the verification of learning outcomes	Evaluation criteria
<i>Kn-1- Kn-13; Sk-1- Sk-13; C-1 – C-13; AR-1 –AR-13</i>	<i>L-1 – L-5; S-1 – S-10; IW-1 – IW- 7</i>	Current control is carried out during the classes and it is aimed to check the comprehension of educational material by students. The form of the assessment of current educational activity is standardized and	The degree of student's knowledge is assessed during every class using a 4-point (national) scale. All types of activities provided by the discipline program are taken into consideration. A student receives a

	<p>includes control of the theoretical preparation. The control of theoretical preparation is performed by the oral assessment and by the assessment of the abilities to solve situational tasks, while practical skills – by the assessment of the abilities to interpret the obtained results.</p> <p>Self-educational work of students is assessed during the current control of the topic in the relevant class.</p>	<p>grade for each topic. Then this 4-point grade is converted into points using a multi-point (200-point) scale.</p> <p><i>Evaluation criteria for current control.</i></p> <p><i>Excellent</i> ("5") – student gives correct, logical and full answers on the standardized questions on the topic, including the material from lectures and independent work. Student can solve situational tasks.</p> <p><i>Good</i> ("4") – student gives correct and logical answers on the standardized questions on the topic, including the material from lectures and independent work. Student can solve situational tasks with simple and moderate degree of complexity.</p> <p><i>Satisfactory</i> ("3") – student gives incomplete answers on standardized questions on the topic, required additional questions to complete the answer. Student cannot give a clear and logical answer, makes mistakes. Student has only the required minimum of theoretical knowledge.</p> <p><i>Fail</i> ("2") – student does not know material on the topic, cannot give logical answer, doesnot understand the topic.</p>
<b>Final control</b>		
General system of evaluation	Form of final control is a credit	
Evaluation scales	Traditional 4-graded scale, multipoint (200-point) scale, rating ECTS scale	
Criteria to be allowed for final control	Students who have completed the all types of activities provided by the program and scored for current educational activity not less than minimum.	
Type of final control	Procedure of final control	Evaluation criteria
Credit	Student is required to pass all topics of the current control. Grades from the 4-point scale are converted into points on a multi-point (200-point) scale in accordance with the Regulation "Criteria, rules and procedures for evaluating the results of students' learning activities."	<i>Maximum score</i> that student can get is 200 points, <i>minimum score</i> – 120. Points for discipline are then converted in traditional 4-graded scale using absolute criteria.

## 9. Policy of the discipline

To organize the educational process, students, educators and administration act in accordance with:

- Regulations on the organization of the educational process (<https://cutt.ly/3ySk64r>);
- Regulations on the criteria and rules for evaluation (<https://cutt.ly/lySlyw0>);
- Regulations on academic integrity (<https://cutt.ly/EySkNHu>)

## 10. Literature

### Basic literature

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2. Дерматология: Учеб. пособие для студентов спец. «Технология парфюмерно-косметических средств» /А.Г.Башура, С.Г.Ткаченко, Е.С.Шмелькова, В.А.Савоськина. – Х.: Изд-во НФаУ; Золотые страницы, 2006. – 200 с.
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12. Практикум з технології лікарських косметичних засобів / Т.Г.Калинюк, Є.В.Бокшан, С.Б.Білоус та ін. – К.: Медицина, 2008. – 184 с.
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**Information resources**

35. Офіційний сайт Міністерства охорони здоров'я України: [www.moz.gov.ua](http://www.moz.gov.ua).
36. Компендиум: лекарственные препараты: – [Електроний ресурс]. – Режим доступу:

<http://compendium.com.ua/>.

37. Щотижневик Аптека: <https://www.apteka.ua/>.

38. FDA website for regulatory guidances. [www.fda.gov/cder/guidance/index.htm](http://www.fda.gov/cder/guidance/index.htm)

### **11. Equipment, material, technical, and software support of the discipline**

Computer and multimedia projector; educational materials and guides

### **12. Additional information**

Responsible person for the educational process at the Department – Yakymiv O.V., PhD, assoc.prof., e-mail: [olga\\_yakymiv@ukr.net](mailto:olga_yakymiv@ukr.net).

It is organized a student scientific group at the Department (scientific advisor - Vashchenko O.O., PhD, assoc.prof., e-mail: [o\\_vashchenko@ukr.net](mailto:o_vashchenko@ukr.net) ) that is focused on the development of medicinal and cosmetic products.

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#### *Head of the Department:*

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