

National Pirogov Memorial Medical University, Vinnytsia

"APPROVE"

Higher Educational Institution
Vice-Rector for Scientific and
Academic Work and International Links

Inna ANDRUSHKO

"30" August 2024 year

«AGREED»

Head of the Department of Pharmacy
 Olena KRYVOVIAZ

"30" August 2024 year

SYLLABUS
of academic discipline

MEDICINAL COSMETICS

Specialty	226 Pharmacy, Industrial Pharmacy
Specialization	226.01 Pharmacy
Educational level	the second (master's) level
Educational programme	<i>EPP «Pharmacy», 2023</i>
Academic year	2024-2025
Department	Pharmacy
Lecturer (if lectures are given)	Ass. Prof. of HEI Tetiana VOITENKO
Contact information	<i>pharmacy@vnmui.edu.ua</i>
Syllabus compiler	Ass. Prof. of HEI Tetiana VOITENKO

1. Status and structure of the discipline

Discipline status	optional courses
Discipline code in EPP/ discipline place in EPP	EC 64// optional courses, optional components of EP
Course / semester	5 th year (IX semester)
The amount of discipline (the total number of hours / number of credits ECTS)	90 hours / 3 credits ECTS
Number of content modules	1 module
The structure of the discipline	Lectures - _10_ hours Practical classes __30_ hours Independent work _50_ hours
Language of study	English
Form of study	Full – time (or remote/mixed according to the order)

2. Description of the discipline

Short annotation of the course, relevance.

Nowadays, cosmetic products are an everyday necessity for every civilised person. Taking care of our appearance is becoming quite important for each of us. Elimination of various skin defects, healing the skin from diseases or manifestations of its aging is an essential component of the modern standard of living. The study of the discipline "Medicinal cosmetics" involves familiarisation with their types, forms and methods of rational and safe use.

Care products for the skin, its appendages, and the oral mucosa are divided into 2 groups: products of the cosmetic industry and medical cosmetics. Medical cosmetics are produced in the same forms as cosmetic products (cosmetics).

Therapeutic cosmetics, unlike cosmetic products, necessarily contain medicinal substances intended for the prevention and treatment of specific nosological forms of pathology, have clearly established indications, contraindications for use and a specific course of treatment (dose, frequency, duration of administration). Medicinal cosmetics include medicinal products intended for the prevention and treatment of diseases of the skin, its appendages (nails, hair, eyelashes) and mucous membranes, containing individual substances or mixtures of substances used for therapeutic or prophylactic purposes and manufactured in the form of cosmetic products.

Unlike medicinal products that are manufactured in classical dosage forms (ointment, liniment, solution, etc.), medical cosmetics combine pharmacological properties with cosmetic and, in some cases, decorative properties..

Prerequisite.

The study of the elective discipline " Medicinal cosmetics" involves the preliminary mastering of the disciplines of general and inorganic chemistry, organic chemistry, human anatomy and physiology, pharmacology, pharmaceutical chemistry. Drug Technologies: Pharmacy compounding, Drug Technology: ITD, pathological physiology, pharmacognosy, clinical pharmacy and pharmaceutical care, pharmaceutical and medical commodity science, pharmaceutical biotechnology, standardisation of medicines, technology of medicinal cosmetics.

The purpose of the course and its significance for professional activities

Formation of theoretical knowledge of higher education students on a differentiated approach to cosmetic and medicinal cosmetics, their rational use for the prevention and treatment of skin diseases. The knowledge gained will help future specialists to provide qualified advice, justify the feasibility of choosing effective and safe medical cosmetics among their extensive range of products on the pharmaceutical market.

Postrequisites. (How will it be needed in the process of further study and professional activity?)

The optional course is the basis for studying the disciplines "Technology of Medicinal Cosmetics", which involves the integration of teaching with the above disciplines and the formation of skills apply knowledge in the process of further education and professional activity.

3. Learning outcomes.

Integrative final program learning outcomes, the formation of which is facilitated by the Initial Theoretic bases of pharmacy compounding:

- Identification of future professional activity as socially significant for human health.
- Implementation of professional activity based on general knowledge of the main stages of formation and development of pharmaceutical science and practice in Ukraine and the world, practical approaches to the organization of medicines and public health facilities, regulations of Ukraine and recommendations of good pharmaceutical practices.
- Rationale for decision making in standard professional situations.
- Formation of basic knowledge and acquisition of practical skills for further study of professional disciplines.

General competencies (GC):

GC 01. The commitment to preserve the environment.

GC 04. Ability to adapt and act in a new situation.

GC 05. Ability to communicate in the state language both orally and in writing, ability to communicate in a foreign language (mainly English) at a level that ensures effective professional activity.

GC 08: Ability to evaluate and ensure the quality of work performed.

GC 09. Ability to conduct research at the appropriate level.

PC 01. Ability to collect, interpret and apply data necessary for professional activity, research and implementation of innovative professional activities, research and implementation of innovative projects in the field of pharmacy.

PC 04. Ability to use in professional activities the knowledge of regulatory and legal acts of Ukraine and recommendations of good pharmaceutical practices.

PC 06. Ability to clearly and unambiguously communicate own knowledge, conclusions and arguments in the field of pharmacy to specialists and non-specialists, including students.

PC 07. Ability to conduct health education among the population in order to prevent common diseases, prevent dangerous infectious, viral and parasitic diseases, as well as to promote timely detection and support adherence to treatment of these diseases in accordance with their biological characteristics and microbiological characteristics.

PC 22. Ability to organise and carry out quality control of medicinal products in accordance with the requirements of the current State Pharmacopoeia of Ukraine and good pharmaceutical practices, to determine the methods of sampling for the control of medicinal products and to standardise them in accordance with current requirements, to prevent the distribution of counterfeit medicinal products.

of counterfeit medicines.

Program learning outcomes for the discipline:

PLO 01. Apply specialised knowledge and skills in general and specialised disciplines to professional activities.

PLO 04. To comply with the norms of sanitary and hygienic regime and safety requirements in the performance of professional activities.

PLO 07. Demonstrate the ability to independently search, analyse and synthesise information from various sources, including professional literature, patents, databases; evaluate it, in particular, using statistical analysis, as well as apply these results to solve typical and complex specialised tasks of professional activity, including the development and production of medicines.

PLO 10. To conduct sanitary and educational work in professional activities in the event of outbreaks of infectious, viral and parasitic diseases.

PLO 13. Predict and determine the impact of environmental factors on the quality and consumer characteristics of medicines of natural and synthetic origin and other pharmacy products, organise their storage in accordance with their physical and chemical properties and the rules of Good Storage Practice (GSP).

PLO 16. To record cases of side effects when using medicines of natural and synthetic origin; to evaluate factors that may affect the processes of absorption, distribution, deposition, metabolism and excretion of medicines

and are determined by the state and characteristics of the human body and pharmaceutical characteristics of medicines.

PLO 22. Develop technological documentation for the manufacture of medicines, choose a rational technology, manufacture medicines in various dosage forms according to prescriptions and requirements (orders) of healthcare facilities, and prepare them for release.

4. Content and logistic of the discipline

Module 1 “Functions and physiological properties of the skin structure and its appendages. The general principle of skin care”.	9 semester 90 hours / 3,0 credits	Lectures № 10 Practical classes № 30 Topics for self- study №50
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The course includes 14 topics, which are divided into 1 thematic module.

Module 1. « Functions and physiological properties of the structure of the skin and skin appendages. General principle of skin care ».

Thematic module 1. Therapeutic and cosmetic agents: powdered, soft, liquid, which are used for skin pathologies.

Topic 1. Anatomical and physiological features of the skin and appendages. Modern methods of research and express diagnostics of the skin.

Topic 2. General principles of body care. Corneotherapy.

Topic 3. Auxiliary substances in the composition of medicinal cosmetics: biologically active substances, vitamins, medicinal plants.

Topic 4. Antioxidants, immunomodulators, vegetable oils in medicinal cosmetics.

Topic 5. Manufacturing technology and application of medical and cosmetic powders, masks.

Topic 6. Medical and cosmetic products of liquid and soft form.

Topic 7. Characteristics, classification and recipe of medical and cosmetic masks.

Topic 8. Manufacture of medicinal cosmetics of a soft form for the care of the skin of the face, hands, feet.

Topic 9. Conditions and principles of manufacturing deodorants and antiperspirants

Topic 10. Cosmetic products for special purposes. Sun protection, oxygen cosmetics, muscle relaxants and cosmetic analogues. Intimate hygiene products.

Topic 11. Skin circulation problems. Care of skin prone to couperose and rosacea.

Topic 12. Violation of the sebaceous glands. Prevention of the development of acne. Seborrhea.

Topic 13. Individual and combined medicinal cosmetics for the treatment of fungal diseases of the skin and skin appendages.

Topic 14. Biotechnology in medical and cosmetic products.

Topics of the *lecture* course that would reveal the problematic issues of the relevant sections of the elective discipline. Methods of lectures: not taught in class, materials are posted on the information resources of the department.

No	Theme of Lecture	Duration
1.	Functions and physiological properties of the structure of the skin and its appendages. The general principle of caring for children's and men's skin.	2
2.	The main ingredients of medical and cosmetic products.	2
3.	General principles of medical and cosmetic care.	2
4.	Medical and cosmetic forms.	2
5.	Special cosmetics.	2
Total		10

Practical classes involve theoretical substantiation of the main issues of the topic

№	Theme content	Duration
Module 1. « Functions and physiological properties of the structure of the skin and skin appendages. General principle of skin care ».		
Thematic module 1. Therapeutic and cosmetic agents: powdered, soft, liquid, which are used for skin pathologies.		
1.	Anatomical and physiological features of the skin and appendages. Modern methods of research and express diagnostics of the skin.	2
2.	General principles of body care. Corneotherapy.	2
3.	Auxiliary substances in the composition of medicinal cosmetics: biologically active substances, vitamins, medicinal plants.	2
4.	Antioxidants, immunomodulators, vegetable oils in medicinal cosmetics.	2
5.	Manufacturing technology and application of medical and cosmetic powders, masks.	2
6.	Medical and cosmetic products of liquid and soft form.	2
7.	Characteristics, classification and recipe of medical and cosmetic masks.	2
8.	Manufacture of medicinal cosmetics of a soft form for the care of the skin of the face, hands, feet.	2
9.	Conditions and principles of manufacturing deodorants and antiperspirants	2
10.	Cosmetic products for special purposes. Sun protection, oxygen cosmetics, muscle relaxants and cosmetic analogues. Intimate hygiene products.	2
11.	Skin circulation problems. Care of skin prone to couperose and rosacea.	2
12.	Violation of the sebaceous glands. Prevention of the development of acne. Seborrhea.	2
13.	Individual and combined medicinal cosmetics for the treatment of fungal diseases of the skin and skin appendages.	2
14.	Biotechnology in medical and cosmetic products.	2
15.	Final lesson on the thematic module 1. Credit.	2
Total		30

Practical classes involve theoretical substantiation of the main issues of the topic and the acquisition of the following practical skills:

1. Explain the preparation of a recipe, according to the prescription.
2. Describe the requirements for medicinal and cosmetic products.
3. To know the principles of manufacturing powdered, liquid and soft medical and cosmetic products.
4. Make a recipe for medical cosmetics of different directions of action.
5. Be able to draw up technological schemes for the production of medical cosmetics.
6. Know the general characteristics and rules for using therapeutic face masks.
7. To characterise medical and cosmetic products of different directions.
8. To know the conditions and rules for the use of ingredients for the manufacture of medical and cosmetic products.
9. Describe the rules for the manufacture and use of soft therapeutic cosmetics.
10. Provide advice on the use of medical and cosmetic products.

11. Describe the active and excipients in medical and cosmetic products.
12. Analyse the organoleptic and physicochemical characteristics of medicinal and cosmetic products.
13. To have the main signs of falsification of medicinal and cosmetic products.

The *independent work* of a higher education student involves preparation for practical classes and intermediate controls, studying topics for independent out-of-class work, writing abstracts, preparation of presentations, tables. The control of mastering the topics of independent out-of-class work is carried out at intermediate control classes and the final control in the discipline.

No	Theme	Duration
Module 1 «Manufacturing and application of medicinal cosmetics»		
1	Preparation for practical training. Theoretical preparation and practical skills development	10
Development of topics that are not included in the classroom plan.		
2	Cosmetic preparations of therapeutic and prophylactic action.	4
3	Aging of the skin and the body as a whole.	4
4	Correction of age-related changes in the conditions of a cosmetology institution with using cosmetics and methods.	4
5	Cosmetic preparations with SPF factor. Classification. Types of solar filters.	4
6	Medicinal cosmetics in the prevention and treatment of fungal diseases.	5
7	Modern methods of correction. Mesotherapy. Biorevitalization. Botulinum toxin.	5
8	Properties of medicinal substances in cosmetics.	4
9	Preparation for the final lesson of module 1.	10
Total		50

Individual work includes the study of scientific literature, preparation of reviews on the topics provided for presentation at the meetings of the student scientific circle, the implementation of scientific and practical researches, participation in specialized competitions, scientific and practical conferences and organization of students' research works.

Thematic plans of lectures, calendar plans of practical classes, thematic plan of independent extracurricular work, volume and directions of individual work are published on the website of the department.

The route for obtaining materials: Department of Pharmacy / for students / Full-time education / Pharmacy, industrial pharmacy / 4 course / Educational materials / or through the link <https://www.vnmU.edu.ua/кафедра-фармації#>. Access to the materials is carried out through the student's corporate account s000XXX@vnmU.edu.ua.

5. Forms and methods of monitoring academic performance

Current control in practical studies	Methods: <i>oral or written survey, testing, electronic survey, solving situational problems, conducting laboratory studies, interpreting them and evaluating their results (drawing up a protocol in a workbook)</i>
Control of mastering the thematic section of the discipline at intermediate control lessons	Methods: <i>oral or written survey, electronic testing, situational problem solving, control of practical skills</i>
Final semester control (credit) at the end of the IX semester	According to the Regulation of the Academic process in VNMU named after M.I. Pirogov (link https://www.vnmU.edu.ua/General information)
Learning success diagnostic tools	Theoretical questions, tests, clinically-oriented situational tasks, practical tasks, practical skills demonstration

6. Assessment criteria

Knowledge assessment is carried out in accordance with the Regulations of the Academic process in VNMU named after M.I. Pirogov (link <https://www.vnmua.edu.ua/General> information)

Continuous assessment	On a four point system of traditional assessments: 5 - «excellent», 4 - «good», 3 - «satisfactory», 2 - «unsatisfactory»
Pass-fail exam	On a 200-point scale (the arithmetic average grade for the semester is converted into points) Credited: 120 to 200 points Not credited: less than 120 points (See Grading Scale)
Discipline assessments:	Current academic assessment - from 72 to 120 points (conversion of the average traditional assessment of practical class on a 120-point scale): 60% of the grade for the discipline Final control - from 50 to 80 points: 40% of the grade for the discipline Individual work - from 1 to 12 points From 122 to 200 points in total.

Discipline Score Scale: National and ECTS

The sum of grades for all types of educational activities	Score ECTS	Score on a national scale	
		For exam, course project (work), practice	for credit test
180-200	A	excellent	credited
170-179,99	B	good	
160-169,99	C		
141-159,99	D	satisfactory	
122-140,99	E	satisfactory	
0-121,99	FX	unsatisfactory with the possibility of reassembly	is not credited with the possibility of reassembling
	F	unsatisfactory with a mandatory reexamination of discipline	is not credited with mandatory reexamination of discipline

7. Policy of discipline / course

The student has the right to receive high-quality educational services, access to contemporary scientific and educational information, qualified advisory assistance during the study of discipline and mastering practical skills. The policy of the department during the providing of educational services is a student-centered, based on normative documents of the Ministry of Education and the Ministry of Health of Ukraine, the Statute of the University and the Procedure for the Providing of Educational Services regulated by the main principles of the organization of the educational process in VNMU named after M.I. Pirogov and the principles of academic integrity (link <https://www.vnmua.edu.ua/General> information).

Adherence to the rules of VNMU, safety techniques in practical classes.

Safety instruction is given at the first practical lesson by the teacher. The briefing is registered in the Safety Briefing Journal. Applicant for higher education who has not been instructed is not allowed to practical class. In case of announcement of the "Air Alert" signal or other warning signals, the teacher stops classes, informs higher education students about the need to go to a civil defence

shelter and stay there until the signal is cancelled. The teacher informs the students about further actions after the signal is cancelled: to continue the class or to recommend to revise the material on their own with a subsequent survey at the next lesson (Order No. 505 of 30.08.2023).

Requirements for preparation for practical classes. Applicant for higher education should be present at the practical lesson on time, theoretically prepared according to the topic. Applicant for higher education should come to class on time, without lateness. Applicant for higher education who is late is not allowed to study and must rework it in the prescribed manner.

In practical classes, the applicant for higher education must be dressed in a work uniform. Applicants for higher education who do not have a work uniform are not allowed to study.

The applicant for higher education must follow the rules of safety in practical classes and during the stay in the department.

When discussing theoretical issues, students should demonstrate tolerance, courtesy and respect for their colleagues and the teacher; when performing practical tasks, the workplace should be kept in order and cleaned after the practical work.

Usage of mobile phones and other electronic devices. The use of mobile phones and other electronic devices in the classroom is allowed only on the instructions of the teacher.

Academic integrity. When studying the discipline, the student must be guided by the Code of Academic Integrity and Corporate Ethics of VNMU named after M.I. Pirogov (link : <https://www.vnm.edu.ua/General> information)/ Code of Academic Integrity). In case of violation of the norms of academic integrity during the current and final controls student receives a grade of "2" and must work it out to his teacher in the prescribed manner within two weeks after receiving an unsatisfactory assessment).

Academic integrity. During the study of the discipline the Applicants for higher education must be guided by the Code of Academic Integrity of VNMU named after MI Pirogov. In case of violation of the norms of academic integrity during the current and final controls, the Applicants for higher education receives a grade of "2" and must work it in the prescribed manner for two weeks.

Missed classes. Missed classes are working out in the manner prescribed by Regulations of the Academic process in VNMU named after M.I. Pirogov (link <https://www.vnm.edu.ua/General> information) at the time of work out schedule (published on the website of the department <https://www.vnm.edu.ua/> department of pharmacy #) to the teacher on duty.

The procedure for admission to the discipline final control is given in the Regulations of the Academic process in VNMU named after M.I. Pirogov (link <https://www.vnm.edu.ua/General> information). To the final control allowed students who do not have missed practical classes and lectures and received an average traditional grade of at least "3".

Additional points. Individual points in the discipline (from 1 to 12) that student can receive for individual work, the amount of which is published on the website of the department in the educational methodical materials of the discipline, the number of points is determined by the results of IRS according to Regulation of the Academic process in VNMU named after M.I. Pirogov (link <https://www.vnm.edu.ua/General> information).

Conflict resolution. In case of misunderstandings and complaints to the teacher because of the quality of educational services, knowledge assessment and other conflict situations, student should submit his / her claims to the teacher. If the issue is not resolved, the student has the right to apply to the head of the department according to Complaints Consideration Procedure in VNMU named after M.I. Pirogov (link <https://www.vnm.edu.ua/General> information)

Politics in terms of remote learning. Distance learning regulated by the Regulations of the elements of remote learning in VNMU named after Pirogov M.I. (<https://www.vnm.edu.ua/General> information). The main training platforms for studying are Microsoft Team and Google Meets. Practical classes and lectures, exercises and consultations during distance learning is published on the website of the department (<https://www.vnm.edu.ua/> Department of of pharmacy / to Students

or <https://www.vnm.u.edu.ua/Department of Microbiology / News>).

Feedback from the teacher is provided through the distance learning platform (Microsoft Teams), messengers or e-mail (at the teacher's discretion) during working hours.

Higher education students have the right to receive quality educational services, access to up-to-date scientific and educational information, qualified advisory assistance in the study of the discipline and mastering practical skills. The department's policy in providing educational services is student-centred, based on the regulations of the Ministry of Education and the Ministry of Health of Ukraine, the university's charter and the procedure for providing educational services, regulated by the main provisions of the educational process at the Pirogov National Medical University and the principles of academic integrity.

8. Educational resources

The educational and methodological support of the discipline is published on the website of the department (https://www.vnm.u.edu.ua/department_pharmacy_____/Student). Consultations are held twice a week according to the consultation schedule.

9. **The schedule and distribution of groups by teachers** is published on the website of the department (https://www.vnm.u.edu.ua/department_pharmacy_____/Student).

10. **Questions for intermediate and final controls of the discipline** are published on the website of the department (https://www.vnm.u.edu.ua/department_pharmacy_____/Student).

Recommended literature

1. Leslie Baumann, MD Cosmeceuticals and Cosmetic Ingredients - McGraw Hill / Medical; 1st edition, 2014 - 368 p.
2. Textbook of Cosmetics Formulation / by Dr. Shikha Baghel Chauhan, Dr. Indu Singh - Independently published, 2023 - 408 p
3. Cosmetic Science and Technology: Theoretical Principles and Applications 1st Edition / by Kazutami Sakamoto, Robert Y. Lochhead, Howard I. Maibach, Yuji Yamashita - Elsevier; 1st edition 2017 - 854 p.
4. Gabriella Baki Introduction to Cosmetic Formulation and Technology, 2nd Edition, 2022 - 832 p.
5. Tharwat F. Tadros Pharmaceutical, Cosmetic and Personal Care Formulations - De Gruyter, 2018 - 410 p.
6. B.M. Mitiial, R.N. Saha A Handbook Of COSMETICS Vallabh Prakashan, 2006 - 240p.

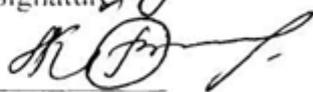
The syllabus of the discipline "Medicinal cosmetics" was discussed and approved at the meeting of the department pharmacy (record № 1_, dated "_30_"_08_2024)

Responsible for the academic discipline


(signature)

Ass. prof. of HEI Tetiana VOITENKO

Head of the department


(signature)

Prof. of HEI Olena KRYVOVIAZ

