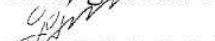


National Pirogov Memorial Medical University, Vinnytsia

"APPROVE"


Acting rector of higher education institution

 Viktoriia PETRUSHENKO

" 31 " 08 2023 year

«AGREED»

Head of the Department of Pharmacy

 Olena KRYVOVIAZ

" 31 " 08 2023 year

SYLLABUS
of academic discipline

EC 22 PERSONALIZED PHARMACY AND COSMETOLOGY

Specialty	226 Pharmacy, Industrial Pharmacy
Educational level	the second (master's) level
Educational programme	<i>EPP «Pharmacy», 2022</i>
Academic year	2023-2024
Department	Pharmacy
Lecturer (if lectures are given)	Prof. of HEI Olena KRYVOVIAZ, Ass. Prof. of HEI Yulia TOMASHEVSKA, PhD, Ass. Prof. Hanna KRAMAR
Contact information	<i>pharmacy@vnmu.edu.ua</i>
Syllabus compiler	PhD, Ass. Prof. Hanna KRAMAR

Status and structure of the discipline

Discipline status	optional courses
Discipline code in EPP/ discipline place in EPP	EC 41// optional courses, optional components of EP
Course / semester	2 rd course (IV semester)
The amount of discipline (the total number of hours / number of credits ECTS)	90 hours /3,0 credits ECTS
Number of content modules	2 modules
The structure of the discipline	Lectures – 10 hours Practical classes - 30 hours Independent work – 50 hours
Language of study	English
Form of education	Full - time (or remote/mixed according to the order)

1. Description of the course

Brief annotation, actuality.

The main focus of the program is to gain knowledge about the model of pharmaceutical care organization, based on the selection of optimal medicines for a specific person, taking into account his genetic, physiological, biochemical, metabolic, psychological or other individual characteristics and the possibilities of using personalized pharmacy in his professional activity.

The subject of the elective course "Personalized Pharmacy and Cosmetology" is the peculiarities of the personalized approach in pharmacy, its use in various branches of pharmaceutical and medical practice, as well as in cosmetology and the development trends of personalized pharmacy and cosmetology.

As a result of studying the optional course, students of higher education will acquire knowledge about:

- Basic terms and concepts used in personalized pharmacy and cosmetology.
- An individual approach in the dosage, form and composition of medicinal and cosmetic products
- Use of personalized pharmacy for medical supply: cancer patients and patients with rare (orphan) diseases
- Personalized approach in allergology
- Personalized pharmacy for pediatric patients
- A personalized approach to the pharmacy client and medical supply as a whole
- Personalized cosmetology and selection of ingredients for individual cosmetics
- The future of personalized pharmacy and cosmetology: pharmacogenomics and stem cell therapy
- A personalized approach to the manufacture of solid, liquid, soft and serial dosage forms.

Prerequisites

The elective course is based on the study of such disciplines as Introduction to Pharmacy, Drug Technology: FC, Drug Technology: ITD, Biology with Basics of Genetics, Introduction to Pharmacy and elective courses: Basics of Aerobiology and Prevention of Seasonal Diseases, Basics of Genomics, Basics of Legislation regulation of the pharmaceutical industry, pharmaceutical terminology and bases of pharmaceutical calculations, anthropogenetics, auxiliary substances in pharmaceutical and cosmetic technology, etc.

The purpose of the course and its significance for professional activities.

To acquaint the student of higher education with modern trends in the development of the industry: personalized pharmacy and cosmetology, the basic principles of individual selection of medicinal and cosmetic products, and branches of pharmaceutical science and practice where the use of a personalized approach is most appropriate.

Postrequisites

The elective course "Personalized Pharmacy and Cosmetology" is the basis for studying the technology of medical cosmetics, medical cosmetics, clinical pharmacy and pharmaceutical care, biopharmacy, which involves the integration of teaching with the above-mentioned disciplines and the formation of skills to apply knowledge in the process of further education and professional activity.

The elective course "Personalized Pharmacy and Cosmetology" deepens the professional training of the applicant, contributes to the formation of the skills of providing quality pharmaceutical care, necessary for mastering the pharmaceutical specialty.

2. Learning outcomes.

- *Integrative final program learning outcomes, the formation of which is facilitated by the elective course "Personalized Pharmacy and Cosmetology":*
- Identification of future professional activity as socially significant for human health.
- Implementation of professional activities based on general knowledge of the main stages of the formation and development of pharmaceutical science and practice in Ukraine and the countries of the world, practical approaches to the organization of providing medicines to the population and health care institutions, regulatory and legal acts of Ukraine and recommendations of proper pharmaceutical practices.
- Argumentation of decision-making in standard professional situations.
- Formation of basic knowledge and acquisition of practical skills for further study of professional educational disciplines.
- *Program learning outcomes for the discipline:*

PLO 2. Apply knowledge of general and professional disciplines in professional activities.

PLO 4. Demonstrate the ability to independently search for, analyze and synthesize information from various sources to solve typical tasks of professional activity.

PLO 9. To carry out professional activities using reference scientific literature, information technologies, "Information databases", navigation systems, Internet resources, software and other information and communication technologies.

PLO 12. Analyze information obtained as a result of scientific research, summarize, systematize and use it in professional activities.

PLO 16. Determine the influence of factors that affect the processes of absorption, distribution, deposition, metabolism and excretion of the medicinal product and are determined by the condition, features of the human body and the physico-chemical properties of medicinal products.

3. Content and logistics of the discipline

Module «Personalized pharmacy and cosmetology»	1 IV semester 90 hours /3 credits ECTS	Lectures №5 Practical classes №15 Extracurricular work №7
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The discipline includes 6 topics, which are divided into 1 module.

Module 1 «Personalized pharmacy and cosmetology»

Topic 1. Concept of personalized medicine, pharmacy and cosmetology: individual approach in dosage, form and composition. Personal medicine as a way of rational development of extemporaneous medicine. A personalized approach to the pharmacy client and medical supply as a whole

Topic 2. A personalized approach to the manufacture of solid, liquid, soft and serial dosage forms.

Topic 3. Use of personalized pharmacy for medical care of cancer patients and patients with rare (orphan) diseases. Centers of personalized pharmacy.

Topic 4. Personalized pharmacy for the pediatric patient: confectionery dosage forms. A personalized approach in allergology: pharmaceutical aspects of ACIT therapy

Topic 5. Personalized approach in aesthetic medicine and cosmetology: principles and features. Personalized cosmetology: selection of ingredients for individual cosmetics: global trends

Topic 6. The future of personalized pharmacy and cosmetology: pharmacogenetics and pharmacogenomics. Stem cell therapy. Cord blood banks. Legislative regulation. Advantages, disadvantages, features.

The topics of the lecture course reveal problematic issues of the relevant sections of the discipline.

Lecture methods: not taught in class, materials are posted on the department's information resources.

Practical classes provide theoretical substantiation of the main issues of the topic and contribute to the formation of skills:

theoretically oriented, which include:

- entrance test control of knowledge of the student of higher education on the topic of the lesson;
- discussion and systematization of normative documents, material of the main and auxiliary literature;
- solving theoretical problems related to the lesson topic;
- solving situational tasks related to the specifics of the development and use of personalized medicinal and cosmetic products;
- conducting initial knowledge control using theoretical questions, situational and calculation problems, recipe prescriptions;

or practically oriented, which include:

- conducting a test entry control of the readiness of higher education applicants for the manufacture of a certain type of medicinal forms;
- discussion of the step-by-step technology of prescriptions related to the topic of practical training;
- production of personalized medicinal and cosmetic products, or their components;
- solving individual situational tasks;
- a teacher's check of the quality of work performed by students of higher education using an oral survey;
- carrying out initial control of learning the material using theoretical questions, situational and calculation problems, recipe prescriptions.

Practical classes provide theoretical substantiation of the main issues of the topic and contribute to the formation of skills:

- Provide the client with basic personalized pharmaceutical care
- Use professional knowledge to solve practical situations.
- Use online resources of centers of personalized pharmacy
- Analyze professional information, make informed decisions, acquire up-to-date knowledge.
- Provide pharmaceutical care to patients in need of personalized medical care
- To carry out professional activities that require updating and integration of knowledge.
- Apply a personalized approach in cosmetology
- Make confectionery dosage forms
- Prepare basic cosmetic products
- To use normative legal acts regulating pharmaceutical activities in Ukraine and abroad.
- Take pharmaceutical factors into account when selecting personalized medicinal and

cosmetic products.

The student's independent work involves preparation for practical classes and intermediate tests, studying topics for independent extracurricular work, writing essays, preparing presentations, tables. The control of mastering the topics of independent extracurricular work is carried out at the intermediate control classes and the final control of the discipline.

Individual work includes the study of scientific literature, preparation of reviews of topics for presentation at meetings of the student scientific group, the implementation of scientific and practical research, participation in specialized competitions, scientific and practical conferences, competitions of student research papers.

Thematic plans of lectures, calendar plans of practical classes, thematic plan of independent extracurricular work, the 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 / 3 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.

4. 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>
Final control of the discipline (credit) at the end of the 4th semester	Methods: <i>oral questioning</i> (according to the Regulation of the Academic process in VNMU named after M.I. Pirogov (link https://www.vnmdu.edu.ua/General information))
Learning success diagnostic tools	Theoretical questions, tests, clinically-oriented situational tasks, practical tasks, practical skills demonstration

5. 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.vnmdu.edu.ua/General> information)

Continuous assessment	On a four point system of traditional assessments: 5 «excellent», 4 «good», 3 «satisfactory», 2 «unsatisfactory»
Credit	On a 200-point scale (the arithmetic average grade for the semester is converted into points) Credited: 122 to 200 points Not credited: less than 122 points (See Grading Scale)

Discipline assessment scale: national and ECT

Discipline assessment scale: national and ECT			
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

6. 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.vnmue.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. A student who has not been instructed is not allowed to practice.

In the event of the announcement of the "Air Alert" signal or other warning signals, the teacher stops the class, informs the students of the need to go to the civil defense shelter and stay there until the signal is canceled. The teacher informs higher education students of further actions after the signal is canceled: to continue the class or to recommend that they independently finalize the material with a subsequent survey at the next class (Order No. 505 of 30.08.2023).

Requirements for preparation for practical classes. The student must be prepared for a practical lesson, tasks to prepare for the current topic must be completed.

A student should come to class on time, without delay. A student who is late is not allowed to study and must work it in the prescribed manner.

In practical classes, the student must be dressed in a work uniform. Students who do not have a work uniform are not allowed to study.

The student 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 be cleaned after performing 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.vnmue.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).

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.vnmue.edu.ua/General> information) at the time of work out schedule 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.vnmue.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 6 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.

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. in VNMU named after M.I. Pirogov.

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. The procedure for conducting practical classes and lectures, practicing and consultations during distance learning is published on the department's website.

Feedback from teachers carried out through a distance learning platform (Microsoft Teams) is via messengers or e-mail (at the teacher's choice) during working hours.

Higher education applicants 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 mastery of practical skills. The policy of the department in the provision of educational services is student-centered, based on the regulations of the Ministry of Education and the Ministry of Health of Ukraine, the university charter and the procedure for the provision of educational services, regulated by the basic provisions of the organization of the educational process at the Pirogov National Medical University and the principles of academic integrity.

7. Educational resources.

Educational and methodological support of the discipline is published on the website of the department (<https://www.vnmua.edu.ua/кафедра-фармації#> / for students). Consultations are held twice a week according to the schedule.

8. The timetable and distribution of groups with assigned teachers are published on the web page of the department (<https://www.vnmua.edu.ua/кафедра-фармації#> / for students).
9. **Questions to the intermediate and final semester control (credit)** of the discipline are published on the web page of the department (<https://www.vnmua.edu.ua/кафедра-фармації#> / for students).

The syllabus of the discipline "Personalized pharmacy and cosmetology" was discussed and approved at the meeting of the department Department of Pharmacy (record № 1, dated August "29" 2023)

Responsible for the academic discipline
(signature)



PhD, Ass. Prof. of HEI Hanna KRAMAR

The Head of the Pharmacy Department
(signature)



Prof. of HEI Olena KRYVOVIAZ