


National Pirogov Memorial Medical University, Vinnytsia

«APPROVE»

Higher Educational Institution  
Vice-Rector for Scientific,  
Pedagogical and Academic Affairs  
Inna ANDRUSHKO  
"29" August 2025 year

«AGREED»

Head of the Department of Pharmacy  
 Olena KRYVOVIAZ  
"29" August 2025 year

**SYLLABUS**  
of academic discipline

**AREAS OF PROFESSIONAL DEVELOPMENT OF A PHARMACIST**

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	2025-2026
Department	Pharmacy
Lecturer (if lectures are given)	Prof. Olena KRYVOVIAZ, Ass. Prof. Yulia TOMASHEVSKA, PhD, Ass. Prof. Hanna KRAMAR
Contact information	<i>pharmacy@vnmnu.edu.ua</i>
Syllabus compiler	Prof. Olena KRYVOVIAZ

## Status and structure of the discipline

Discipline status	optional courses
Discipline code in EPP/ discipline place in EPP	EC 28// optional courses, optional components of EP
Course / semester	2 nd 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	1 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 elective course «Areas of professional development of a pharmacist» belongs to the cycle of disciplines for the professional-oriented training of specialists in specialty 226 "Pharmacy, Industrial Pharmacy". Specialisation 226.01 Pharmacy.

**The main focus** of the programme is to acquire the knowledge necessary for successful adaptation to the conditions of study at a higher education institution, to learn the general provisions of documents regulating the procedure and educational process at VNMU, the structure of the educational system for the speciality «Pharmacy, Industrial Pharmacy», and the definition and analysis of qualification requirements and the code of ethics for pharmaceutical workers.

The elective course «Areas of Professional Development for Pharmacists» **focuses on** preparing future employees of the pharmaceutical industry by providing accessible and transparent information about university education, postgraduate education, continuous professional development, possible areas of future employment, and the basic principles that should guide professional activity.

#### Prerequisites

The course is based on the study of subjects in the curriculum, such as Ukrainian language (for professional purposes) and introduction to pharmacy.

**The purpose of the course and its significance for professional activities:** is to prepare higher education seekers for their future professional activities, to shape their individual educational trajectories, to establish principles of continuous professional development, and to identify interesting and promising areas for higher education seekers, which will facilitate their choice of future employment.

#### Postrequisites

The elective course «Areas of Professional Development for Pharmacists» provides the foundation for studying Drug Technology: FC, Drug Technology: ITD, technologies of medicinal cosmetics, therapeutic cosmetics, clinical pharmacy and pharmaceutical care, pharmacology, biopharmacy, pharmaceutical management and marketing, which involves the integration of teaching with the above disciplines and the formation of skills to apply knowledge in the process of further training and professional activity.

The elective course «Areas of Professional Development for Pharmacists» lays the foundations for professional training and promotes the development of technical and pharmaceutical thinking necessary for the pharmaceutical profession.

### 2. Learning outcomes.

#### • Integral (IC)

The ability to solve complex problems and critically analyse and solve practical problems in professional pharmaceutical and/or research and innovation activities using the provisions, theories

and methods of fundamental, chemical, technological, biomedical and socio-economic sciences; integrate knowledge and solve complex issues, formulate judgements with insufficient or limited information; clearly and unambiguously convey one's knowledge, conclusions and their validity to professional and non-professional audiences.

- **General competencies (GC):**

GC 02. Ability to think abstractly, analyse and synthesise.

GC 03. Knowledge and understanding of the subject area and understanding of professional activity.

GC 04. Ability to adapt and act in new situations. Ability to show initiative.

GC 06. Skills in using information and communication technologies.

GC 07. Ability to choose a communication strategy, ability to work in a team and with experts from other fields of knowledge/types of economic activity.

GC 11. Ability to preserve and multiply the moral, cultural, scientific values and achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technologies, to use various types and forms of physical activity for active recreation and a healthy lifestyle.

- **Special (Professional, subject) competencies (PC):**

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

PC 03 Ability to solve pharmacy problems in new or unfamiliar environments with limited information, taking into account aspects of social and aesthetic responsibility.

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

PC 05. Ability to demonstrate and apply in practical activities communication skills, fundamental principles of pharmaceutical ethics and deontology based on moral obligations and values, ethical standards of professional conduct and responsibility in accordance with the Code of Ethics for Pharmaceutical Workers of Ukraine and WHO guidelines.

PC 06. Ability to clearly and unambiguously convey one's knowledge, conclusions and arguments in the field of pharmacy to specialists and non-specialists, in particular to students.

PC 7. Ability to conduct health education among the population in order to prevent the spread of disease and dangerous infectious, viral and parasitic diseases in accordance with their medical and biological characteristics and microbiological properties.

PC 12. Ability to organise the activities of pharmacy establishments to provide the population and healthcare institutions with medicines and other pharmacy products and to implement appropriate reporting and accounting systems (managerial, statistical, accounting and financial) in accordance with the requirements of the National Medicines Policy, Good Pharmacy Practice (GPP) and to carry out commodity analysis and administrative record keeping, taking into account the organisational and legal norms of pharmaceutical legislation.

- **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:**

PI.O 01. Apply specialised knowledge and skills/abilities in general and professional disciplines in professional activities.

PI.O 02. Critically analyse scientific and applied problems in the field of pharmacy.

PI.O 03. Evaluate and ensure the quality and effectiveness of activities in the field of pharmacy.

PI.O 04. Comply with sanitary and hygienic regulations and safety requirements in the performance of professional activities.

PI.O 05. Plan and implement professional activities based on the regulatory and legal acts of Ukraine and recommendations of good pharmaceutical practices.

PI.O 07. Demonstrate the ability to independently search for, analyse and synthesise information from various sources, including professional literature, patents and databases; evaluate it, in particular using statistical analysis, and apply these results to solve typical and complex specialised tasks of professional activities, including the development and production of medicinal products.

PI.O 08. Develop and make effective decisions to solve complex/comprehensive pharmacy problems personally and based on the results of joint discussions; formulate goals for one's own activities and those of the team, taking into account social and production interests, overall strategy and existing limitations, and determine the best ways to achieve these goals.

PI.O 09. Develop and implement innovative projects in the field of pharmacy, as well as related interdisciplinary projects, taking into account technical, social, economic, ethical, legal and environmental aspects.

PI.O 10. Conduct health education work in professional activities in the event of outbreaks of infectious, viral and parasitic diseases.

PI.O 12. Promote health preservation, in particular disease prevention, rational prescription and use of medicines. Conscientiously perform professional duties, comply with legislation on the promotion and advertising of medicines. Possess psychological communication skills to achieve trust and mutual understanding with colleagues, doctors, patients and consumers.

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

PI.O 15. Formulate, argue, clearly and specifically convey to specialists and non-specialists, including higher education students, information based on their own knowledge and professional experience, the main trends in the development of global pharmacy and related industries.

PI.O 16. Record cases of side effects when using natural and synthetic medicines; assess factors that may affect the processes of absorption and distribution, storage, metabolism and excretion of medicines and are determined by the condition and characteristics of the human body and the pharmaceutical characteristics of medicines.

As a result of studying the discipline, higher education seekers should:

**Know:**

- Basic terms and concepts used in the pharmaceutical industry.
- Regulatory and legislative documents of Ukraine that define the basic rules and requirements for the training and further professional development of pharmacy workers.
- Their social and civil rights and responsibilities.
- Professional rights and responsibilities.
- Methods of applying knowledge in solving practical problems.
- Current trends in the development of the industry.
- Structure and features of professional activity.
- Basic provisions of the Code of Ethics for Pharmacy Workers.
- Basic principles of a pharmacist's work based on evidence-based medicine.
- Basic provisions of Good Pharmacy Practice.
- Areas for realising one's creative and professional potential.

**Be able to:**

- Identify the relationship between the development of pharmaceutical education and the general historical development of society.
- Use regulatory and legal acts governing pharmaceutical activities in Ukraine and abroad.
- Use professional knowledge to solve practical situations.
- Analyse professional information, make informed decisions, and acquire up-to-date knowledge.
- Carry out professional activities that require updating and integration of knowledge.
- Form an individual educational trajectory.
- Realise one's own creative and professional potential.
- Work with pharmacist protocols.

**3. Content and logistics of the discipline**

Module 1: «Areas of professional development of a pharmacist»	4 semester 90 hours /3 credits LCIS	Lectures №5 Practical classes №15 Extracurricular work №8
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The course includes 8 topics, which are divided into 1 thematic module.

**Module 1: «Areas of professional development of a pharmacist»**

Topic 1. Rights and responsibilities of pharmaceutical workers. Qualification requirements.

Topic 2. Code of ethics for pharmacy workers.

Topic 3. Features of the professional activities of pharmaceutical specialists.

Topic 4. Realising the potential of higher education students during their studies. Developing professional orientation.

Topic 5. Continuous professional development of pharmaceutical workers (postgraduate education). Certification of pharmacists. Professional organisations and public associations.

Topic 6. Areas of professional realization for pharmacists. Communication in pharmacist-patient and pharmacist-manager systems.

Topic 7. The work of a pharmacist based on evidence-based medicine.

Topic 8. Scientific developments in the field of pharmacy. фесійної спрямованості.

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:

- identify the flows of pharmaceutical logistics;
- distinguish between functional and auxiliary types of pharmaceutical logistics;
- understand the concepts of direct route sales, pre-sales, telemarketing, e-commerce;
- know and use the functions performed by the wholesale trade;
- create orders;
- determine order volumes and negotiate sales.

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

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 / 2 course / Educational materials / or through the link <https://www.vnmdu.edu.ua/кафе:пра-фармації#..> Access to the materials is carried out through the student's corporate account [s000XXX@vnmdu.edu.ua](mailto:s000XXX@vnmdu.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 semester control (credit) at the end of the IV semester	According to the Regulation of the Academic process in VNMU named after M.I. Pirogov (link <a href="https://www.vnmdu.edu.ua/General information">https://www.vnmdu.edu.ua/General information</a> )
Learning success diagnostic tools	Theoretical questions, tests, 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 mean grade for the semester is converted into points) Pass: from 122 to 200 points Not credited: less than 122 points (see grading scale)

### 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
<b>180-200</b>	<b>A</b>	excellent	credited
<b>170-179,99</b>	<b>B</b>	good	
<b>160-169,99</b>	<b>C</b>		
<b>141-159,99</b>	<b>D</b>	satisfactory	
<b>122-140,99</b>	<b>E</b>	satisfactory	
<b>0-121,99</b>	<b>FX</b>	unsatisfactory with the possibility of reassembly	is not credited with the possibility of reassembling
	<b>F</b>	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.vnmu.edu.ua/General information](https://www.vnmu.edu.ua/General%20information)).

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

The safety briefing shall be conducted by the instructor at the first practical lesson. The briefing shall be recorded in the Safety Briefing Log. A student who has not been briefed is not allowed to participate in practical training.

In case of announcement of the "Air Alert" signal or other warning signals, the teacher stops the class, informs the higher education students about 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 92 of 03.09.2024).

**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 must come to-class on time. 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.vnmu.edu.ua/General information](https://www.vnmu.edu.ua/General%20information))/ 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.vnmdu.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.vnmdu.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.

**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.vnmdu.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.vnmdu.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.vnmdu.edu.ua/кафедра-фармації#> / for students).

### **Recommended literature**

1. Vlasenko, I. O., Davtian, I. L., & Korytniuk, R. S. (2025). The aspects of modern professional education of pharmacist interns about pharmaceutical technology. *Farmatsevtichnyi Zhurnal*, (3), 34-47. <https://doi.org/10.32352/0367-3057.3.25.03>

2. Shapovalova B., Osyntseva A., Malekh H., & Shapovalov B. (2024). PHARMACY OF THE FUTURE: DEVELOPMENT OF THE THEMATIC IMPROVEMENT CYCLE "LATEST DISCOVERIES AND PROSPECTS IN THE FIELD OF PHARMACY". *Actual Problems of Medicine and Pharmacy*, 5(2), 1–18.

3. Drumm S, Moriarty F, Rouse MJ, Croke D, Bradley C. The development of an accreditation framework for continuing education activities for pharmacists. *Pharmacy*. 2020;8(2):75.



4. Policarpo V, Romano S, António JHC, Correia TS, Costa S. A new model for pharmacies? Insights from a quantitative study regarding the public's perceptions. *BMC Health Serv Res*. 2019;19(1):186.

5. Batista, J.P.B., Torre, C., Sousa Lobo, J.M. *et al.* A review of the continuous professional development system for pharmacists. *Hum Resour Health* 20, 3 (2022). <https://doi.org/10.1186/s12960-021-00700-1>

#### Information resources

1. E-mail address of the university website: <http://vnmuedu.ua>
2. E-mail address of the university library website: <http://library.vnmuedu.ua>
3. E-mail address: Department of Pharmacy, Pirogov National Medical University: <http://www.vnmuedu.ua>
4. World Health Organization <http://www.who.int/en/>
5. Testing center <https://www.testcentr.org.ua/uk/>
6. Ministry of Health of Ukraine <https://moz.gov.ua/>
7. Center for Public Health of the Ministry of Health of Ukraine <https://phc.org.ua/kontrol-zakhvoryuvan>
8. International Journal of Pharmaceutical and Healthcare Marketing: <https://www.emerald.com/journals>

The syllabus of the discipline «Areas of professional development of a pharmacist» was discussed and approved at the meeting of the department Department of Pharmacy (record № 1, dated August "26" 2025)

Responsible for the academic discipline (signature)		Olena KRYVOVIAZ
The Head of the Pharmacy Department (signature)		Olena KRYVOVIAZ