



COURSE SYLLABUS

Academic discipline for Master's degree training:
PROCEEDING PRACTICE ON PHARMACY COMPOUNDING

Specialty	226 Pharmacy, Industrial Pharmacy
Educational Programme	EPP “Pharmacy” (2023)
Higher Education Level	Second (Master's)
Academic Year	2026–2027
Status of the Discipline	Mandatory
Language of Instruction	Ukrainian, English
Total Workload	5.0 ECTS credits
Year of Study / Semester	IV / 7 (full-time) V / 9 (part-time)
Developer(s)	H. Kramar, Associate Professor, Candidate of Pharmaceutical Sciences
Instructor(s), Guest Lecturers	O. Kryvoviaz, Professor, Doctor of Pharmaceutical Sciences; Yu. Tomashevskaya, Associate Professor, Candidate of Pharmaceutical Sciences; O. Toziuk, Associate Professor, Candidate of Pharmaceutical Sciences; H. Kramar, Associate Professor, Candidate of Pharmaceutical Sciences
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1. DESCRIPTION OF THE ACADEMIC DISCIPLINE

ABSTRACT

Brief course overview and relevance. The academic discipline “Proceeding practice on pharmacy compounding” belongs to the professional training component for students enrolled in Specialty 226 “Pharmacy, Industrial Pharmacy”. The discipline helps consolidate theoretical knowledge and develop practical skills in compounding medicinal products in a pharmacy, repackaging finished medicinal products, and preparing in-pharmacy stock preparations.

The subject of the practice comprises the theoretical aspects of technological processes involved in the preparation of medicinal products in pharmacies and industrial pharmaceutical enterprises. The programme is designed to provide knowledge of the technological processes used to prepare various dosage forms and the operating principles of equipment used in pharmaceutical technology, and to develop skills in preparing solid, liquid, and semi-solid dosage forms according to individual prescriptions, taking into account the theoretical foundations of pharmacy compounding and regulatory requirements.

Prerequisites are the academic disciplines providing the knowledge and skills required to complete “Proceeding practice on pharmacy compounding”.

The practice is based on natural science and professional disciplines, including Latin, general and inorganic chemistry, organic chemistry, analytical chemistry, physical and colloid chemistry, and biology with genetics. It is integrated with Pharmacology, Pharmaceutical Botany, Pharmacognosy, Pharmacotherapy, and Clinical Pharmacy.

PURPOSE AND OBJECTIVES

The purpose of the course and its relevance to professional practice are to consolidate, deepen, and expand the theoretical knowledge and practical skills acquired at the higher education institution; master core professional competencies directly in a workplace setting; and gain practical work experience.

Competencies and learning outcomes to which the discipline contributes.

• *Integral competence (IC): The ability to solve problems and understand and address practical problems of a research and/or innovation nature in the field of pharmacy.*

• **General competencies (GC):**

- GC 01. Commitment to environmental preservation.
- GC 02. Ability to think abstractly, analyse, and synthesise.
- GC 03. Knowledge and understanding of the subject area and 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 and work in a team and with experts from other fields of knowledge and types of economic activity.
- GC 08. Ability to assess and ensure the quality of work performed.
- GC 09. Ability to conduct research at an appropriate level.
- GC 11. Ability to preserve and enhance society’s moral, cultural, and scientific values and achievements based on an understanding of the history and patterns of development of the subject area and its place in the overall system of knowledge about nature and society and in the development of society, engineering, and technology; ability to use various types and forms of physical activity for active recreation and a healthy lifestyle.

• *Specific (professional/subject-specific) competencies (SC):*

- SC 01. Ability to collect, interpret, and apply data required for professional activity, research, and implementation of innovative projects in pharmacy.
- SC 02. Ability to integrate knowledge and solve complex pharmacy problems in broad or multidisciplinary contexts.

SC 04. Ability to use knowledge of Ukrainian regulatory and legislative acts and Good Pharmaceutical Practice guidelines in professional activity.

SC 05. Ability to demonstrate and apply communication skills and the fundamental principles of pharmaceutical ethics and deontology in practice, 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.

SC 06. Ability to communicate one's knowledge, conclusions, and reasoning in pharmacy clearly and unambiguously to specialists and non-specialists, including students.

SC 18. Ability to organise and carry out pharmacy operations involving the compounding of medicinal products in various dosage forms according to medical prescriptions and healthcare facility orders, including justification of the technology and selection of excipients in accordance with Good Pharmacy Practice (GPP).

SC 22. Ability to organise and perform quality control of medicinal products in accordance with the current State Pharmacopoeia of Ukraine and good pharmaceutical practices; determine sampling methods for medicinal product quality control and perform standardisation in accordance with current requirements; and prevent the distribution of falsified medicinal products.

Post-requisites. These are disciplines that require the knowledge and skills acquired upon completion of "Proceeding practice on pharmacy compounding". The discipline provides a foundation for Pharmaceutical and Medical Commodity Science, Good Pharmaceutical Practices, Pharmaceutical Chemistry, Pharmacy Management and Marketing, Biopharmaceutics, Standardisation of Medicinal Products, and Technology of Medicinal Cosmetic Products. The practice establishes the foundations of professional training and promotes the pharmaceutical and technical thinking required for professional activity.

2. LEARNING OUTCOMES

Programme learning outcomes for the discipline:

PLO 01. Apply specialised knowledge and skills from general and professional disciplines in professional practice.

PLO 02. Critically evaluate scientific and applied problems in pharmacy.

PLO 03. Assess and ensure the quality and effectiveness of activities in pharmacy.

PLO 04. Comply with sanitary and hygienic requirements and occupational safety rules in professional practice.

PLO 05. Plan and carry out professional activities in accordance with Ukrainian regulations and Good Pharmaceutical Practice guidelines.

PLO 07. Demonstrate the ability to independently search for, analyse, and synthesise information from various sources, including professional literature, patents, and databases; evaluate it, including through statistical analysis; and apply the results to routine and complex specialised professional tasks, including the development and manufacture of medicinal products.

PLO 08. Develop and make effective decisions to solve complex pharmacy problems individually and through joint discussion; formulate goals for individual and team activities, taking into account social and production interests, overall strategy, and existing constraints; and determine optimal ways to achieve these goals.

PLO 15. Formulate, substantiate, and communicate information clearly and specifically to specialists and non-specialists, including higher education students, based on personal knowledge and professional experience and on key trends in global pharmacy and related fields.

PLO 22. Develop technological documentation for the preparation of medicinal products, select appropriate technologies, prepare medicinal products in various dosage forms according to prescriptions and healthcare facility orders, and prepare them for dispensing.

PLO 26. Ensure and perform quality control of medicinal products of natural and synthetic origin and document the results; prepare quality certificates and certificates of analysis in accordance with the current edition of the State Pharmacopoeia of Ukraine, quality control methods, technological instructions, etc.; and take measures to prevent the distribution of substandard, falsified, and unregistered medicinal products.

3. FORMS OF ORGANISATION OF THE EDUCATIONAL PROCESS AND THEIR SCOPE

Type of Learning Activity	Hours
Full-time study	
Lectures:	–
Practical Training:	60
Independent Study:	90
Total	150
Part-time study	
Lectures:	–
Practical Training:	–
Independent Study:	150
Total	150

4. THEMATIC PLAN

Module 1. Extemporaneous Compounding of Medicinal Products

Topic 1: Get acquainted with the production premises of the pharmacy.

Topic 2. Dosing in pharmacy technology of drugs by mass, volume and drops.

Topic 3. Preparation of solid dosage forms.

Topic 4. Preparation of liquid dosage forms.

Topic 5. Preparation of soft dosage forms.

Topic 6. Preparation of aseptic dosage forms.

Topic 7. Preparation for a differentiated Credit in practice.

Completion of reporting documentation and preparation for the test assessment.

5. FORMS AND METHODS OF ASSESSING LEARNING OUTCOMES

Ongoing assessment during practical classes	<u>Methods: oral or written questioning and testing, computer-based questioning and testing, solving situational tasks.</u>
Final assessment of the discipline – differentiated pass/fail assessment	Conducted after completion of the practice and assessed in accordance with the Regulations on the Organisation of the Educational Process at National Pirogov Memorial Medical University, Vinnytsia: https://www.vnmu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf / https://www.vnmu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf
Learning outcome assessment tools	Theoretical questions, tests, practice-oriented situational tasks, practical assignments, and demonstration of practical skills.

6. ASSESSMENT CRITERIA

Knowledge is assessed in accordance with the current Regulations on the Organisation of the Educational Process at National Pirogov Memorial Medical University, Vinnytsia ([https://www.vnmu.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)). [https://www.vnmu.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)

Ongoing assessment	According to the traditional grading scale: 5 “Excellent”, 4 “Good”, 3 “Satisfactory”, 2 “Unsatisfactory”.
Assessment of practical skills	According to the traditional grading scale.
Course assessment	Ongoing performance: 72–120 points (conversion of the average traditional grade for practical classes to a 120-point scale), accounting for 60% of the course grade. Final assessment: 50–80 points, accounting for 40% of the course grade. Individual work: 1–12 points. Total: 122–200 points.

Course Grading Scale: National and ECTS

180–200	A	National grade: pass/fail	
		Excellent	Passed
170–179.99	B	Good	Failed, with the possibility of retaking
160–169.99	C	Satisfactory	
141–159.99	D		
122–140.99	E	Satisfactory	
0–121.99	FX	Unsatisfactory, with the possibility of retaking	
	F	Unsatisfactory, with mandatory repetition of the discipline	Failed, with mandatory repetition of the discipline
	F	Unsatisfactory, with mandatory repetition of the discipline	Failed, with mandatory repetition of the discipline

Criteria for Assessing Students’ Knowledge

Assessment of Oral/Written Responses during Ongoing Assessment

The grade “Excellent” is awarded when a student demonstrates comprehensive knowledge of the topic, illustrating responses with a variety of relevant examples; provides complete, accurate, and clear answers without prompting or leading questions; presents the material without errors or inaccuracies; confidently solves problems and completes practical tasks of varying levels of complexity; and independently generates innovative ideas.

The grade “Good” is awarded when a student demonstrates good knowledge and understanding of the topic and provides correct, coherent, and well-structured answers, although they may not be fully comprehensive. The student answers additional questions correctly and without significant errors; successfully solves problems and completes practical tasks, experiencing difficulties only with the most complex assignments.

The grade “Satisfactory” is awarded when a student demonstrates knowledge of the overall content of the topic and a satisfactory level of understanding. With the help of guiding questions, the student is able to solve modified (simplified) problems; solves problems and completes practical tasks, although experiencing difficulties even with

relatively simple assignments; is unable to formulate a coherent and systematic response independently but provides correct answers to direct questions.

The grade “Unsatisfactory” is awarded when a student’s knowledge and skills do not meet the requirements for the grade “Satisfactory”.

The assessment criteria for all other types of students’ academic work are based on the requirements of the Regulations on the Organisation of the Educational Process at National Pirogov Memorial Medical University, Vinnytsya,

([https://www.vnmue.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmue.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)) and are specified in the programme of the academic discipline.

Assessment of Students’ Independent Study

Students’ independent study undertaken as part of a topic alongside contact hours is assessed as part of the ongoing assessment of that topic during the relevant practical class.

The maximum number of points a student may receive upon completion of the discipline is 200 points. The minimum passing score is 122 points.

7. METHODOLOGICAL SUPPORT

Teaching and learning materials (lecture notes or extended lecture outlines), thematic plans for lectures, practical classes and independent study, assignments for ongoing assessment, methodological guidelines, and teaching manuals.

8. ACADEMIC DISCIPLINE POLICIES

The completion of learning activities and all academic work within the discipline must comply with the requirements of the Regulations on the Organisation of the Educational Process at National Pirogov Memorial Medical University, Vinnytsya; ([https://www.vnmue.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmue.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)), the Regulations on the Organisation of the Educational Process for Higher Education Students Pursuing the Degree of Doctor of Philosophy at National Pirogov Memorial Medical University, Vinnytsya (https://www.vnmue.edu.ua/downloads/other/pologPhD_org.pdf); the Law of Ukraine “On Education” (Article 42); the Law of Ukraine “On Academic Integrity”; and the Code of Academic Integrity of National Pirogov Memorial Medical University, Vinnytsya (https://www.vnmue.edu.ua/downloads/other/kodex_akad_dobr_edit%202026.pdf)

Students are entitled to high-quality educational services and a safe learning environment under martial law, emergency situations and states of emergency; access to up-to-date scientific and educational information; and qualified academic guidance and support in studying the discipline and acquiring practical skills.

The Department’s policy on the provision of educational services is student-centred and is based on the regulatory documents of the Ministry of Education and Science of Ukraine and the Ministry of Health of Ukraine, the University Statute, the procedures governing the provision of educational services, including in emergency situations, as stipulated by the principal regulations and administrative directives governing the organisation of the educational process at National Pirogov Memorial Medical University, Vinnytsya, as well as on the principles of academic integrity.

Academic Integrity. When studying the discipline and completing all types of learning assignments and/or research activities, students must comply with the Law of Ukraine “On Education” (Article 42), the Law of Ukraine “On Academic Integrity”, and the Code of Academic Integrity of National Pirogov Memorial Medical University, Vinnytsya ([University website → General Information → Key Documents → Code of Academic Integrity](#)). In the event of a violation of academic integrity principles, appropriate measures shall be taken in accordance with the applicable regulatory documents.

Compliance with VNMU Internal Regulations and Safety Requirements during Practical Classes. At the first practical class, the instructor provides a safety briefing on appropriate conduct on the Department premises, informs students of the location of the shelter and the evacuation route to the shelter in accordance with the approved evacuation plan, explains the rules of conduct while proceeding to and remaining in the shelter, and

provides instructions on all actions stipulated by the Emergency Response Plan (pursuant to Order No. 505 dated 30 August 2023). In the event of an air raid alert or any other emergency warning signal, the instructor suspends the class. The instructor and students proceed together to the shelter and remain there until the warning signal is cancelled. Once the alert has been lifted, the instructor and students either resume the class in the Department's classrooms or students independently complete the remaining learning material, which is subsequently assessed at the next class.

Requirements for Preparation for Practical Classes

Students must participate actively in the educational process: attend classes prepared, complete current-topic test assignments in their workbooks, fill in diagrams and tables, participate in discussions, complete all assignments specified in the programme, and find and present additional relevant information to their peers.

Students must arrive on time. Lateness is not permitted under the University's Internal Regulations. A student arriving more than 10 minutes late will not be admitted to the class and must make it up in accordance with the established procedure.

Students must be polite, courteous, and respectful when interacting with instructors, staff, classmates, and other University students. They must maintain a quiet and orderly environment on the Department premises.

The Department adheres to the principles of mutual respect and tolerance, and students are expected to do the same.

Students must comply with safety rules while on the Department premises.

In teaching and research laboratories, students must follow the safety rules published on the Department of Pharmacy website. Workstations must be kept orderly and cleaned after practical work.

Use of Mobile Phones and Other Electronic Devices. Mobile phones and other electronic devices may not be used during classes, except for emergency calls or when presenting supplementary materials relevant to the class topic.

Absence from Classes. Missed classes must be made up in accordance with the current Regulations on the Organisation of the Educational Process at the University ([https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)), at the times specified in the make-up schedule published on the Department website. Make-up work requires completion of assignments related to the missed topic and the discipline's **requirements**.[https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)

Mastery of lecture topics is assessed during practical or seminar classes, including assessment of practical skills, and during the final assessment ([https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)).[https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)

Admission to Final Assessment. The procedure is set out in the current University Regulations

([https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)). Students may be admitted if they have no outstanding academic requirements: the average ongoing grade must be at least 3.0 (72 points on the 120-point scale), all module assessments must be passed with a grade of 3 or higher, and all missed practical classes must be made up with a passing grade. Otherwise, students must improve unsatisfactory grades and make up missed classes.[https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)

Additional Points for Individual Assignments. Students may earn additional points for high-quality individual work described in the discipline's teaching materials on the Department website. Points are awarded according to the results of the assignment and the current University Regulations

([https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)).[https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc\(2026\).pdf](https://www.vnmdu.edu.ua/downloads/other/polog_organiz_ocv_proc(2026).pdf)

Resolution of Conflict Situations

In the event of misunderstandings or concerns regarding the quality of educational services, assessment of academic performance, or other conflict situations involving an instructor, students should first raise their concerns directly with the instructor. If the issue remains unresolved, the student has the right to submit an appeal to the Head of the Department in accordance with the Regulations on the Consideration of Appeals from Higher Education Students at National Pirogov Memorial Medical University, Vinnytsya ([VNMU website → General Information → Key Documents](#)).

Students also have the right to contact the student self-government bodies, the administration of the Faculty (Institute), or the University administration, either directly or through the designated feedback channels (“trust boxes”), links and addresses for which are available on the official VNMU website.

The Department recognises that a student-centred approach entails students’ responsibility for the conscious and active acquisition of knowledge and for proper compliance with the rules and requirements established by applicable legislation and VNMU regulatory documents. The Department reserves the right to inform the relevant University bodies of any violations committed by students.

Policy on Blended Learning

The organisation of blended learning is governed by the Regulations on the Introduction of Elements of Distance Learning at National Pirogov Memorial Medical University, Vinnytsya ([VNMU website → General Information → Key Documents](#)). The main online learning platforms used for classes are Microsoft Teams and Google Meet.

The procedures for conducting practical classes, lectures, make-up classes, and consultations in the distance learning format are published on the Department’s webpage ([VNMU website → Pharmacy Department → For Students/Postgraduate Students → Mode of Study → Year of Study → Teaching and Learning Materials](#)).

Communication with the Instructor. Students may contact the instructor via Microsoft Teams chat, messaging applications (Viber, Telegram, WhatsApp), or email, as determined by the instructor, during working hours.

9. LEARNING RESOURCES

Teaching and learning materials for the discipline are available on the Department’s website. The materials can be accessed via: [VNMU website → \[Pharmacy Department\] → For Students/Postgraduate Students](#).

LITERATURE

Core Literature:

1. Tikhonov O. I., Yarnykh T. H. Pharmacy Drug Technology: textbook for students of pharmacy faculties of higher medical educational institutions of Ukraine, accreditation levels III–IV. 5th ed. Vinnytsia: Nova Knyha, 2019. 536 p., ill.
2. Teaching manual “Drug Technology: Pharmacy Technology of Medicines” for students of the Faculty of Pharmacy (Specialty “Pharmacy, Industrial Pharmacy”). Part 1: Technology of Solid and Liquid Non-Sterile Dosage Forms / O. V. Kryvoviaz, Yu. O. Tomashevskaya, O. Yu. Toziuk, A. S. Voronkina, H. I. Kramar, V. V. Kudria. Vinnytsia, 2024. Approved by the Academic Council of National Pirogov Memorial Medical University and recommended for publication (Minutes No. 9, 25 April 2024). 209 p. Available at: <https://cutt.ly/KeXcLMWc>
3. Teaching manual “Drug Technology: Pharmacy Technology of Medicines” for students of the Faculty of Pharmacy (Specialty “Pharmacy, Industrial Pharmacy”). Part 2: Semi-Solid Dosage Forms; Suppositories; Aseptically Prepared Dosage Forms; Difficult Prescriptions; Pharmaceutical Incompatibilities / O. V. Kryvoviaz, Yu. O. Tomashevskaya, O. Yu. Toziuk, A. S. Voronkina, H. I. Kramar, V. V. Kudria. Vinnytsia, 2024. Approved by the Academic Council (Minutes No. 9, 25 April 2024). 176 p. Available at: <https://cutt.ly/BeXcKTvA>

4. Production Practice in Pharmacy Technology of Medicines: methodological guidelines for students of the Faculty of Pharmacy (Specialty “Pharmacy, Industrial Pharmacy”) / O. V. Kryvoviaz, Yu. O. Tomashevskaya, O. Yu. Toziuk, A. S. Voronkina, H. I. Kramar, V. V. Kudria. Vinnytsia, 2024. Approved by the Academic Council (Minutes No. 9, 25 April 2024). 101 p. Available at: <https://cutt.ly/aeXvjgOG><https://cutt.ly/aeXvjgOG>

5. Drug Technology: teaching and methodological manual for higher education students / O. V. Mazulin, A. O. Ostapenko, O. S. Shpychak et al. 3rd ed., unchanged. Lviv: Publisher T. V. Marchenko, 2024. 428 p.

6. Law of Ukraine “On Medicinal Products” dated 23 August 2023 [online]. Available at: <https://zakon.rada.gov.ua/laws/show/2469-20#Text>

7. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed., Supplement 5. Kharkiv, 2021. 424 p.

8. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed., Supplement 6. Kharkiv, 2023. 416 p.

9. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed., Supplement 7, Vol. 1. Kharkiv, 2024. 424 p.

10. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed., Supplement 7, Vol. 2. Kharkiv, 2024. 424 p.

11. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed., Supplement 8. Kharkiv, 2025. 452 p.

12. Order of the Ministry of Health of Ukraine No. 360 of 19 July 2006 “On Approval of the Rules for Prescribing Medicinal Products, the Procedure for Dispensing Medicinal Products from Pharmacies and Their Structural Units, and the Instructions for Storage, Recording, and Destruction of Prescription Forms”.

13. Order of the Ministry of Health of Ukraine No. 1099 of 10 August 2025 “On Approval of State Sanitary Rules and Regulations: Sanitary and Anti-Epidemic Requirements for Pharmacy Establishments” [online]. Available at: <https://zakon.rada.gov.ua/laws/show/z1233-25#Text><https://zakon.rada.gov.ua/laws/show/z1233-25#Text>

14. Order of the Ministry of Health of Ukraine No. 812 of 17 October 2012 “On Approval of the Rules for the Manufacture (Compounding) of Medicinal Products in Pharmacies” [online]. Available at: <http://zakon1.rada.gov.ua/laws/show/z1606-04><http://zakon1.rada.gov.ua/laws/show/z1606-04>

15. Guideline “Requirements for the Compounding of Non-Sterile Medicinal Products in Pharmacies. ST-N MOHU 42-4.5:2015” [online]. Available at: http://www.moz.gov.ua/ua/portal/dn_20150701_0398.htmlhttp://www.moz.gov.ua/ua/portal/dn_20150701_0398.html

16. Guideline “Requirements for the Compounding of Sterile Medicinal Products in Pharmacies. ST-N MOHU 42-4.6:2015” [online]. Available at: http://www.moz.gov.ua/ua/portal/dn_20150701_0398.html

Supplementary Literature

1. State Pharmacopoeia of Ukraine / Scientific and Experimental Pharmacopoeial Centre. 1st ed. Kharkiv: RIREG, 2001. 556 p.

2. State Pharmacopoeia of Ukraine / Scientific and Experimental Pharmacopoeial Centre. 1st ed. Kharkiv: RIREG, 2004. Supplement 1. 494 p.

3. State Pharmacopoeia of Ukraine / Scientific and Experimental Pharmacopoeial Centre. 1st ed. Kharkiv: RIREG, 2008. Supplement 2. 620 p.

4. State Pharmacopoeia of Ukraine / Scientific and Experimental Pharmacopoeial Centre. 1st ed. Kharkiv: RIREG, 2010. Supplement 3. 279 p.

5. State Pharmacopoeia of Ukraine / Scientific and Experimental Pharmacopoeial Centre. 1st ed. Kharkiv: RIREG, 2011. Supplement 4. 538 p.

6. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed. Kharkiv, 2015. Vol. 1. 1128 p.

7. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed. Kharkiv, 2014. Vol. 2. 724 p.
8. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed. Kharkiv, 2015. Vol. 3. 732 p.
9. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed. Supplement 1. Kharkiv, 2016. 360 p.
10. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed. Supplement 2. Kharkiv, 2018. 336 p.
11. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed. Supplement 3. Kharkiv, 2018. 416 p.
12. State Pharmacopoeia of Ukraine / Ukrainian Scientific Pharmacopoeial Centre for Quality of Medicines. 2nd ed. Supplement 4. Kharkiv, 2020. 600 p.

Electronic Resources

1. University website: <http://vnmuedu.ua>
2. University Library website: <http://library.vnmuedu.ua> <http://library.vnmuedu.ua>
3. Department of Pharmacy, National Pirogov Memorial Medical University: <http://www.vnmuedu.ua>
4. World Health Organization: <http://www.who.int/en/>
5. Education Quality Centre of the Ministry of Health of Ukraine: <https://www.testcentr.org.ua/uk/> <https://www.testcentr.org.ua/uk/>
6. Ministry of Health of Ukraine: <https://moz.gov.ua/> <https://moz.gov.ua/>
7. Public Health Center of the Ministry of Health of Ukraine: <https://phc.org.ua/kontrol-zakhvoryuvan> <https://phc.org.ua/kontrol-zakhvoryuvan>
8. Official web portal of the Verkhovna Rada of Ukraine: <https://www.rada.gov.ua/> <https://www.rada.gov.ua/>
9. State Service of Ukraine on Medicines and Drugs Control: <https://www.dls.gov.ua/> <https://www.dls.gov.ua/>

The syllabus for "Proceeding practice on pharmacy compounding" was discussed and approved at a meeting of the Department of Pharmacy (Minutes No. 1, dated 26 August 2026).

Course Coordinator

Candidate of Pharmaceutical Sciences, Associate Professor
(Academic degree and title)

(Signature)

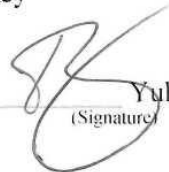


Hanna KRAMAR

Acting Head of the Department of Pharmacy

Candidate of Pharmaceutical Sciences,
Associate Professor
(Academic degree and title)

(Signature)



Yuliia TOMASHEVSKA