

**SYLLABUS OF THE EDUCATIONAL COMPONENT  
TECHNOLOGY OF HOMEOPATHIC MEDICINES**

(the name of the educational component)

for applicants for higher education of 2023-2024 year of study \_\_\_\_ form of education second  
(master's level) of higher education

of educational program « Pharmacy »

(Educational Program Name)

in specialty « 226 Pharmacy, industrial pharmacy »

(Code and Specialty Name)

field of knowledge « 22 Healthcare »

(Code and Knowledge Field Name)

training for \_\_\_\_ second (master's level) of higher education

(Higher Educational Level Name)

**TEACHERS**



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1. **The name of higher education establishment and department:** National University of Pharmacy, Department of Pharmaceutical Technology of Medicines.
2. **Address of the department:** Kharkiv, street Valentynivska, 4, 4th floor, tel. 0572-67-91-84.
3. **Web site of the department:** <http://atl.nuph.edu.ua/>
4. **Information about teachers:**

**Vyshnevskaya Lilia Ivanivna**

Head of the Department of Pharmacy Technology of Medicines, Doctor of Pharmaceutical Sciences.

Experience of scientific and pedagogical work 32 years

Lectures and teaches practical and laboratory classes in the disciplines "Pharmacy Technology of Medicines", "Technology of Pharmaceutical Medicines", "Biopharmacy", "Technology of Homeopathic Medicines", "Pharmaco-Technological Research of Medicines". Research interests: conducting research in the field of "Development of composition, technology and biopharmaceutical research of drugs based on natural and synthetic raw materials".

**Semczenko Kateryna Valentynivna**

Doctor of Pharmaceutical Sciences, Associate Professor, 10 years of teaching experience.

He teaches the disciplines "Technology of pharmaceutical drugs", "Biopharmacy", "Homeopathy".

Research interests: conducting research in the field of "Development of composition, technology and biopharmaceutical research of drugs based on natural and synthetic raw materials".

**Konovalenko Iona Sergiivna**

Candidate of Pharmaceutical Sciences (PhD), assistant.

Experience of scientific and pedagogical work 6 years.

Conducts classes in the following disciplines: "Pharmacy drug technology", "Pharmacy drug technology", "Fundamentals of pharmaceutical homeopathy", "Biopharmacy".

Scientific interests: development of composition and technology of extemporaneous drugs for non-hormonal therapy of climacteric syndrome, development and research of homeopathic medicines.

**5. Consultations and practice** of missed classes take place in Online mode according to the schedule posted on the website of the Department of Pharmaceutical Technology of Medicines.

**6. Brief summary of the educational component:** the discipline "Technology of homeopathic medicines" is selective for the second (master's) level in the specialty "226 Pharmacy, industrial pharmacy".

**7. The purpose statement of studying the educational component** deepening of professional knowledge and acquaintance with theoretical and practical bases of technology of homeopathic medicines in pharmaceutical conditions, quality control, rules of registration before release, storage conditions and features of application by patients.

**8. Competences in accordance with the educational program:**

**Soft- skills / General competences (CG):**

**CG 2.** Ability to apply knowledge in practical situations.

**CG 6.** Knowledge and understanding of the subject area and understanding of the profession.

**CG 9.** Skills in the use of information and communication technologies.

**CG 11.** Ability to evaluate and ensure the quality of work performed.

**Hard-skills / Professional (special) competences (PC):**

**PC 7.** Ability to ensure proper storage of medicines and other pharmacy products in accordance with their physico-chemical properties and Good Storage Practice (GSP) rules in healthcare facilities.

**PC 12** Ability to use knowledge of regulatory and legislative acts of Ukraine and recommendations of proper pharmaceutical practices in professional activity.

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

**9. The program learning outcomes: (PLO):**

**PLO 3.** Organize the production activities of the pharmacy.

**PLO 4.** Organize the technological process of manufacturing drugs for industrial and pharmaceutical production.

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

**PLO 26.** To choose a rational technology, to manufacture medicinal products in various medicinal forms according to the prescriptions of doctors and orders of medical institutions, to process them before discharge. Perform technological operations: weigh, measure, dose various medicinal products by weight, volume, etc. Develop and draw up technological documentation for the manufacture of medicinal products in pharmacies.

**10. Status of the educational component:** selective

**Course format:** lectures, practical and seminar classes for a better understanding of topics.

**11. Prerequisites of the educational component:** the discipline is based on the study of physics, general, inorganic and organic chemistry, physical and colloid chemistry, biology with the basics of genetics, medical botany and pharmacy technology of drugs.

**12. The volume of the educational component:** 4 years 10 months and 3 ECTS credits 90 hours: 32 hours of classroom classes, of which - 6 hours of lectures, 24 hours - practical classes, 2 hours - seminars. 58 hours of independent work;

**13. Organization of training:** conducting lectures, practical and seminar classes for a better understanding of topics, independent work.

**Teaching format of the educational component:**

**Content of the educational component:**

*Semantic module 1. General questions of technology of homeopathic medicines. Basic homeopathic medicine technology*

**Topic 1. The concept of homeopathy and its basic principles. State regulation of the production of homeopathic medicines. Features of prescribing homeopathic recipes. Nomenclature of homeopathic medicines**

*Basic concepts and terms of homeopathy: homeopathy, homeopathic pharmacy, homeopathic drugs, homeopathic diagnosis, vital forces, principle of likeness. State regulation of the production of homeopathic medicines. Nomenclature of homeopathic medicines (Order of the Ministry of Health of Ukraine No. 165 dated 03.08.1989, Project "Ukrainian nomenclature of monocomponent homeopathic medicines").*

**Topic 2. Classification of homeopathic medicines. Preparation of homeopathic matrix tinctures according to SPhU and their quality control**

*Classification of homeopathic preparations obtained from raw materials of plant, animal and mineral origin. Technology of homeopathic matrix tinctures depending on the percentage content of juice in plant raw materials according to DFU, physicochemical methods of quality analysis of matrix tinctures.*

**Topic 3. Dilution scales. The principle of potentiation of homeopathic remedies. Potentiation of homeopathic matrix tinctures**

*Dilution scales: decimal, hundredth, M, LM; their essence, designation and concentration of active substances. Classification of homeopathic dilutions (low, medium, high). Appointment of appropriate dilutions for the treatment of acute and chronic diseases. Features of the technology of potentiation of homeopathic matrix tinctures depending on the method of preparation. Solvents used for dilution of base preparations.*

**Topic 4. Breeding homeopathic. Technology of homeopathic liquid dilutions, registration for dispensing and quality control**

*Peculiarities of preparation of dilutions on decimal and hundredth scales. Liquid homeopathic dilutions from mineral substances and chemical compounds. Homeopathic dilutions. Characteristic. Peculiarities of application in homeopathic practice. Homeopathic drops. Definition. Characteristic. Technology. Quality control. Features of registration before vacation.*

**Topic 5. Hering's law of healing. Technology of homeopathic oils, registration for dispensing and control of their quality**

*Basic principles of Goering's law of healing. Comparison of allopathic and homeopathic therapy. Oils. Definition. Characteristic. Quality control Features of registration before release. Solvents used for the manufacture of homeopathic oils.*

**Topic 6. Technology of basic drugs, rare homeopathic dosage forms, registration for dispensing and control of their quality.**

*Control of assimilation of SM 1*

**Topic 7. Constitutional type of the patient. Homeopathic granules. Technology of homeopathic granules, preparation for release and quality control.**

*Constitutional type of the patient. Solid dosage forms in homeopathic practice. Homeopathic granules. Definition. Characteristic. Technology and requirements for their quality. Reception features. Features of registration before vacation.*

**Topic 8. Homeopathic triturations. Technology of homeopathic triturations, registration for leave and quality control.**

*Triturations are homeopathic. Definition. Characteristic. Quality control Features of registration before release. Storage conditions for triturations, sanitary regime. Excipients in the technology of solid medicines.*

**Topic 9. Complex homeopathic medicines. Technology of complex homeopathic medicines, registration for dispensing and quality control.**

*Principles of complex homeopathy. Classification and characteristics of complex homeopathic drugs. Technology of solid and liquid complex means. Quality control Features of registration before release.*

**Topic 10. Technology of rigid, complex homeopathic dosage forms, registration for dispensing and quality control.**

*Control of assimilation of SM 2*

**Semester modular control**

#### 14. Forms and types of academic achievements supervision:

##### *Forms and types of academic achievements supervision*

Current control: oral survey, writing test tasks, solving situational (calculation) problems, control of practical skills.

Control of content modules: written survey, solution of situational (calculation) problems.

Semester control form: final module control.

Conditions for admission to the control of content modules: In order to be admitted to the control of content modules 1 and 2, a minimum number of points for topics (lessons) of content modules 1 and 2 is required.

Conditions for admission to the semester control: Current rating of more than 36 points, absence of unworked passes of practical and seminar classes, fulfillment of all requirements stipulated by the work program of the educational component.

#### 15. Evaluation system of the educational component:

The results of the semester control in the form of a semester credit are evaluated on a 100-point, non-differentiated scale ("passed", "failed") and on the ECTS scale as the sum of marks for meaningful modules obtained during the semester.

*Points from the educational component are calculated according to the following ratio:*

Types of assessment	Maximum number of points (% of the number of points per module - for content modules)
Module 1. General issues of the technology of homeopathic medicines. Technology of basic homeopathic drugs	
Content module 1: evaluation of topics (1-6) (work in classes 1-6): work in classes (oral theoretical survey, solution of practical-oriented tasks)	60 (60 %)
Module 2. Technology of homeopathic dosage forms	
Content module 1: assessment of topics (7-10) (work in classes 7-10): work in classes (oral theoretical survey, solving practical-oriented tasks)	40 (40 %)
Semester control from module 1	100

**The individual work of applicants for higher education is evaluated during the progress supervision and during the content module supervision**

#### 16. Academic policies of the educational component:

*Policy regarding deadlines, working out, rating increase, liquidation of academic debts.* The completion of missed classes by an applicant for higher education is carried out in accordance with the REG "Regulations on the completion of missed classes by applicants and the procedure for eliminating academic differences in the curricula of the National University of Pharmacy" in accordance with the schedule for working out missed classes established by the department. Increasing the rating and liquidating academic debts from the educational component is carried out by the applicants in accordance with the procedure specified in the REG "On the procedure for evaluating the results of training of applicants for higher education at the National University of Pharmacy".

*Policy on appeals of evaluation of the educational component (appeals).* Applicants for higher education have the right to contest (appeal) the evaluation of the educational component obtained during control measures. The appeal is carried out in accordance with the REG "Regulations on appealing the results of the final supervision of knowledge by applicants of higher education at the National University of Pharmacy".

#### 17. Information and educational and methodical support of the discipline:

<b>The main reading suggestions</b>	1. Вишневецька Л.І., Ромась К.П. Екстемпоральні гомеопатичні препарати для лікування нікотинної залежності: перспективи створення. «Доказова гомеопатія»: збірник доповідей VIII з'їзду гомеопатів України, присвяченого 120-річчю дня народження засновника Київської гомеопатичної школи Д. В. Попова (13-14 листопада 2019 р.). Київ: «Гомеопатія від Попових», 2019. С. 83-85.
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	<p>2. Гомеопатична фармація і медицина. Глосарій термінів та визначень: навч. посібник / Вишневська Л.І. та ін. / Х., Вид-во НФаУ, 2017 р. – 437 с.</p> <p>3. Державна Фармакопея України : в 3 т. / ДП «Український науковий фармако-пейний центр якості лікарських засобів». – 2-е вид. – Х. : ДП «Український науковий фармакопейний центр якості лікарських засобів», 2014. Т. 3. 732 с.</p> <p>4. Ernst E. Homeopathy: what does the "best" evidence tell us? Medical Journal of Australia. 2019. Vol. 192. P. 458-460.</p>
<b>Supplementary reading suggestions for in-depth study of the educational component</b>	<p>1. Державна фармакопея України / ДП «Український науковий фармакопейний центр якості лікарських засобів». 1-е вид. Харків : Державне підприємство "Український науковий фармакопейний центр якості лікарських засобів", 2014. Т. 2. 724 с.</p> <p>2. Державна Фармакопея України / ДП «Український науковий фармакопейний центр якості лікарських засобів». 2-е вид. Харків : Державне підприємство «Український науковий фармакопейний центр якості лікарських засобів», 2015. Т. 3. 732 с.</p> <p>3. Державна Фармакопея України / ДП «Український науковий фармакопейний центр якості лікарських засобів» 2-е вид. Харків : Державне підприємство «Український науковий фармакопейний центр якості лікарських засобів». 2015. Т. 1. 1128 с.</p> <p>4. Dysmenorrhea and endometriosis in the adolescent. –AGOG Committee Opinion № 760 // American College of Obstetricians and Gynecologists. J. Obstet. Gynecol. 2018. 132. P. 249-258.</p>
<b>Current electronic information resources (magazines, websites) for in-depth study of the educational component</b>	<ul style="list-style-type: none"> <li>• <a href="http://atl.nuph.edu.ua">atl.nuph.edu.ua</a> – сайт кафедри аптечної технології ліків</li> <li>• Наукова бібліотека НФаУ: Режим доступу : <a href="http://lib.nuph.edu.ua">http://lib.nuph.edu.ua</a></li> <li>• <a href="http://www.moz.gov.ua">www.moz.gov.ua</a> – офіційний сайт Міністерства охорони здоров'я України</li> <li>• <a href="http://nuph.edu.ua">nuph.edu.ua</a> – офіційний сайт Національного фармацевтичного університету</li> <li>• <a href="mailto:library@nuph.edu.ua">library@nuph.edu.ua</a> – сайт бібліотеки НФаУ</li> <li>• Сайт дистанційного навчання НФаУ : сторінка кафедри АТЛ – [Електронний ресурс]. – Режим доступу: <a href="http://pharmel.kharkiv.edu/moodle/course/">http://pharmel.kharkiv.edu/moodle/course/</a></li> <li>• Компендіум: лікарські препарати. – [Електронний ресурс]. – Режим доступу: <a href="http://compendium.com.ua/">http://compendium.com.ua/</a> – станом на 10.08.2023 р.</li> <li>• Державний реєстр лікарських засобів України. – [Електронний ресурс]. – Режим доступу: <a href="http://www.drlz.com.ua/">http://www.drlz.com.ua/</a> – станом на 10.08.2023 р.</li> </ul>
<b>Moodle distance learning system</b>	<a href="https://pharmel.kharkiv.edu/moodle/course/view.php?id=3756">https://pharmel.kharkiv.edu/moodle/course/view.php?id=3756</a>

**18. Technical support and software of the educational component:** laboratories are equipped with pharmacy furniture, equipment and devices for dosing and manufacturing pharmaceuticals (turntables for medicinal and auxiliary liquids, burette units, capsule machines, universal thermal cabinet ED-53 - 3 units, magnetic stirrers (BINDER, Germany) - 2 units, homogenizers Salent Crusher M (Heidolph instruments GmbH&Co. KG) and Daihan Homogenizer with Direct Controller HG-15A (Daihan Scientific, Korea), laminar cabinet Streamline SCR-2A1, electronic scales AXIS BTU-2100, electronic scales TBE - 3 units, pH meter "pH-305" and pH-150 MI, Granum R40 microscope (R40003) with Granum DCM 310 digital video camera, rotary evaporator, sterile filtration unit, LabAnakyt DM 0412 clinical centrifuge, GP-40 sterilizer - 1 unit, DE distiller -10, a PTS 3E device for determining the solubility of

suppositories (PHARMA TEST, Germany), a PTSW 0 cell for determining the solubility of suppositories (PHARMA TEST, Germany), a colorimeter for medical, laboratory and auxiliary utensils, taring materials, medicinal and auxiliary substances, LRS. Means of communication, Internet access, interactive whiteboard, computers - 57 units, printers - 15 units, scanner - 1 unit, Mitsubishi EX-10 multimedia projectors - 3 units.