

SYLLABUS OF THE EDUCATIONAL COMPONENT



TECHNOLOGY OF HOMEOPATHIC MEDICINES

for students of higher education in the 4th year of full-time education
Educational program "Pharmacy"
Specialties 226 "Pharmacy, industrial pharmacy"
Fields of knowledge 22 "Health care"
Second (master's) level of higher education

TEACHERS

Information about the teacher

SEMCHENKO Kateryna Valentynivna	Professor of the Department of Pharmacy Technology of Medicines, Doctor of Pharmaceutical Sciences, Professor	tolochko.kv@gmail.com	https://atl.nuph.edu.ua/en/pedagogical-staff/semchenko-kateryna-valentynivna/
LEVACHKOVA Yuliia Valentynivna	Professor of the Department of Pharmacy Technology of Medicines, Doctor of Pharmaceutical Sciences, Professor	lejuva15@gmail.com	https://atl.nuph.edu.ua/en/levachkova-yuliia/

- 1. Name of the institution of higher education and division:** National Pharmaceutical University, Department of Pharmacy Technology of Medicines.
- 2. Address of the department:** 61121, Kharkiv, str. Valentynivska , 4, 4th floor, tel. 0572-67-91-84.
- 3. Website of the department:** <http://atl.nuph.edu.ua/>
- 4. Consultations:** *take place in* Online mode according to the schedule posted on the website of the Department of Pharmacy Technology of Medicines.

5. Abstract of the educational component: in the selective educational component "Technology of homeopathic medicinal products" is an important component of the training of a future specialist and a part of the general human culture. Homeopathic pharmacy is a branch of scientific knowledge and practical activity aimed at the search, creation, production, quality control, research, storage, sale, marketing of homeopathic medicines, as well as the organizational and legal aspects of providing pharmaceutical homeopathic care. Currently, homeopathy is a permitted treatment method in Ukraine. To provide homeopathic treatment, medicinal products are required, which are used in small doses and are manufactured using a special technology. The specificity of the system of homeopathic pharmacy lies in

the features of production, quality control, implementation and use of homeopathic medicines, which are closely related to the observance of the main principles of homeopathy: similarity, research of homeopathic medicines, potentiation. In this regard, the pharmacist needs to have a general understanding of the method of homeopathy, homeopathic medicines, manufacturing technologies of homeopathic medicines, regulatory documentation in the field of homeopathic pharmacy. The study of this educational component contributes not only to increasing the professional level of conducting scientific research activities, but also to increasing the culture of thinking, the culture of mental activity in general, which helps a person to better understand and evaluate reality.

6. The purpose of teaching the educational component: deepening of professional knowledge and familiarization with the theoretical and practical bases of the technology of homeopathic medicines in pharmacy conditions, quality control, rules of registration before release, storage conditions and features of use by patients.

7. Competencies according to the educational program:

Soft - skills / General competences (SK):

ZK 2. Ability to apply knowledge in practical situations.

ZK 6. Knowledge and understanding of the subject area and understanding of professional activity.

ZK 9. Skills in using information and communication technologies.

ZK 11. Ability to evaluate and ensure the quality of performed works.

Hard-skills / Professional (special) competences (FC):

FC 7. Ability to ensure proper storage of medicines and other products of the pharmacy assortment in accordance with their physico-chemical properties and the rules of Good Storage Practice (GSP) in health care institutions. FC 12. Ability to use knowledge of regulatory and legislative acts of Ukraine and recommendations of proper pharmaceutical practices in professional activity. FC 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).

8. Program learning outcomes (LPL):

PRN 3. To comply with the norms of the sanitary and hygienic regime and the requirements of safety equipment when carrying out professional activities.

PRN 4. Demonstrate the ability to independently search, analyze and synthesize information from various sources and use these results to solve typical and complex specialized tasks of professional activity.

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

PRN 26. Choose a rational technology, manufacture medicinal products in various dosage forms according to the prescriptions of doctors and orders of medical institutions, prepare them for release. 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.

9. Status of the educational component: selective

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

11. Scope of the educational component : for applicants of higher education:

(4 years, 10 months) 3 ECTS credits 90 hours: 32 hours of classroom classes, of which 6 hours of lectures, 24 hours of practical classes, 2 hours of seminar classes; 58 hours of independent work.

12. Organization of training :

Teaching methods :

- *explanatory (informational and reproductive) method:* Lecture-based learning –lectures, video materials;
- *reproductive method:* traditional practical classes;

- *problem teaching*: Brainstorming – "brainstorming" method; Case-based learning – case method;
- *partial search method*: Game-based learning – game methods of learning (business games); Team-based learning – the method of working in small groups;
- *research method*: Research-based learning – participation in research work, preparation of theses of conference reports, scientific articles.

Content of the educational component:

Content module 1. General issues of the technology of homeopathic medicines. Technology of basic homeopathic drugs

Topic 1. Concept of homeopathy and its basic principles. State regulation of the production of homeopathic medicines. Peculiarities of prescribing homeopathic prescriptions. Nomenclature of homeopathic medicines.

Topic 2. Classification of homeopathic drugs. Preparation of homeopathic matrix tinctures according to DFU and their quality control.

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

Topic 4. Dilutions are homeopathic. Technology of liquid homeopathic dilutions, preparation for release and their quality control.

Topic 5. Goering's law of healing. Technology of homeopathic oils, preparation for release and quality control.

Topic 6. Technology of basic drugs, liquid homeopathic medicinal forms, preparation for release and their quality control.

Control of acquisition of ZM 1

Content module 2. Technology of homeopathic dosage forms

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

Topic 8. Homeopathic triturations . Homeopathic trituration technology , preparation for release and quality control.

Topic 9. Complex homeopathic medicines. Technology of complex homeopathic medicines, preparation for release and their quality control.

Topic 10. Technology of solid, complex homeopathic medicinal forms, preparation for release and their quality control.

Control of acquisition of ZM 2

Semester modular control

Organization of independent work:

Independent work includes the study of topics of the educational component that are not included in classroom classes, and the completion of tasks on these topics in order to consolidate the theoretical material.

13. Types and forms of control:

Types and forms of control:

Current control:

Control of knowledge at each lesson: oral survey, writing test tasks, solving situational (calculation) problems, control of practical skills.

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

Conditions for admission to control of content modules: the presence of a minimum number of points for topics (lessons) of content modules 1 and 2, for control of content module 1 (for control of content module 2).

Semester control:

Semester control form: semester assessment.

Conditions for admission to semester control:

the current rating is more than 60 points, the presence of the minimum number of points for the control of the content module 1 and 2, the absence of unworked passes of practical and seminar classes, the fulfillment of all the requirements stipulated by the work program of the educational component.

14. Evaluation system for the educational component:

Evaluation of mastering the topics of the educational component during classes:

<i>Subject number of the educational component</i>	<i>Maximum number of points for the topic</i>	<i>Distribution of the maximum number of points per topic by type of work</i>	<i>Types of work for which the applicant receives points</i>
Content module 1			
Topic 1.	6	1	testing
		2	oral answer
		3	solving practical-orientative tasks
Topic 2.	6	1	testing
		2	oral answer
		3	solving practical-orientative tasks
Topic 3.	6	1	testing
		2	oral answer
		3	solving practical-orientative tasks / or / participation in conferences, seminars, webinars
Topic 4.	6	1	testing
		2	oral answer
		3	solving practical-orientative tasks
Topic 5.	6	1	testing
		2	oral answer
		3	solving practical-orientative tasks
Topic 6.	6	1	testing
		2	oral answer
		3	solving practical-orientative tasks
Total points for content module 1 :		36	
Content module 2			
Topic 7.	6	1	testing
		2	oral answer
		3	solving practical-orientative tasks
Topic 8.	6	1	testing
		2	oral answer
		3	solving practical-orientative tasks
Topic 9.	6	1	testing
		2	oral answer

		3	solving practical-orientative tasks
Topic 10.	6	1	testing
		2	oral answer
		3	solving practical-orientative tasks
Total points for content module 2:		24	
Total points for the module:		60	

The study of the educational component by students of higher education is possible with the help of non-formal education. Instead of performing types of work on any topic of the educational component, the following types of work of a student of higher education may be counted:

–participation in conferences, seminars, webinars on the topic of the educational component (with the preparation of essays, abstracts of reports, information messages, etc., which is confirmed by the program of the event, or abstracts of reports, or a corresponding certificate).

Evaluation of winners by types of work during classes:

<i>Types of work, for which the acquirer receives points</i>	<i>Maximum number of points</i>
testing	10
answers to theoretical questions	20
solving practical-orientative tasks	30
Total points:	60

Evaluation during control of content modules:

<i>Types of work, for which the acquirer receives points</i>	<i>Distribution of the maximum number of points for control of the content module by types of work</i>	<i>The maximum number of points for control of the content module</i>
<i>Content module 1</i>		
answers to theoretical questions	10	20
solution of a practical- orientative task	10	
<i>Content module 2</i>		
answers to theoretical questions	10	20
solution of a practical- orientative task	10	
<i>Total points for control of content modules:</i>		<i>40</i>

Evaluation of independent work of the student of education:

during current control: 10 points - testing

during control of content module 1: tickets for content module 1 include theoretical questions on the topics of the educational component that were not included in classroom classes

during the control of content module 2: tickets for content module 2 include theoretical questions on topics of the educational component that were not included in classroom classes

Evaluation scale of the semester credit:

When studying the educational component, several assessment scales are used: a 100-point scale, an undifferentiated ("passed", "not passed") two-point scale and the ECTS rating scale. The results are converted from one scale to another according to the table.

Total points on a 100-point scale	ECTS scale	Evaluation on a non-differentiated scale
90-100	A	counted
82-89	B	
74-81	C	
64-73	D	
60-63	E	
35-59	FX	not counted
1-34	F	

15. Policies of the educational component:

Academic Integrity Policy . It is based on the principles of academic integrity stated in the POL "On measures to prevent cases of academic plagiarism at the National Institute of Public Health ". Writing off when evaluating the success of a student of higher education during control measures in practical (seminar) classes, control of content modules is prohibited (including using mobile devices). The detection of signs of academic dishonesty in the student's written work is a reason for the teacher not to enroll it .

Class attendance policy. The student of higher education is obliged to attend classes (POL "On the organization of the educational process of the National University of Ukraine ") according to the schedule (<https://nuph.edu.ua/rozklad-zanyat/>), to observe ethical norms of behavior.

Policy regarding deadlines, working out, rating increase, liquidation of academic debt. Completion of missed classes by a student of higher education is carried out in accordance with the POL "Regulations on the completion of missed classes by students and the procedure for the elimination of academic differences in curricula at the National Academy of Sciences " in accordance with the timetable for making up missed classes established at the department. Increasing the rating and liquidating academic debt from the educational component is carried out by the students in accordance with the procedure specified in the POL "On the procedure for evaluating the results of training of students of higher education at the National Institute of Higher Education ". Applicants of higher education are obliged to comply with all deadlines set by the department for the completion of written works from the educational component. Works that are submitted in violation of deadlines without valid reasons are evaluated for a lower grade - up to 20% of the maximum number of points for this type of work.

Policy on appeals of assessment from the educational component (appeals). Applicants of higher education have the right to challenge (appeal) the evaluation of the educational component obtained during control measures. The appeal is carried out in accordance with the POL "Regulations on appealing the results of the semester control of knowledge of applicants higher education at NFaU .

Policy on the recognition of learning outcomes obtained through non-formal and/or informal education by higher education students . Applicants of higher education have the right to recognition of learning results acquired in informal and informal education in accordance with the POL "On the procedure for recognition of educational results obtained through informal and/or informal education by applicants of higher education at the National Institute of Public Health " .

As part of the academic freedom of the teacher, instead of performing types of work on the subject of the educational component, it is possible to enroll in the non-formal education of a student of higher education.

16. Information and educational and methodological support of the discipline:

Mandatory literature	1. Homeopathic pharmacy and medicine. Glossary of terms and definitions: education . manual / Vishnevskaya L.I. etc. / Kh., Publishing House of the National Academy of Sciences , 2017 - 437 p. 2. Vishnevskaya L.I., Romas K.P. Extemporaneous homeopathic drugs for the treatment of nicotine addiction: prospects for creation. "Evidential homeopathy": a collection of reports of the 8th Congress of Homeopaths of Ukraine, dedicated to the 120th anniversary of the birth of the founder of the Kyiv Homeopathic School, D.V. Popov (November 13-14, 2019). Kyiv: "Homeopathy from the Popovs", 2019. P. 83-85. 3. State Pharmacopoeia of Ukraine: in 3 volumes / SE "Ukrainian Scientific Pharmacopoeia Center for the Quality of Medicinal
	Products". - 2nd edition. – Kh.: SE "Ukrainian Scientific Pharmacopoeial Center for the Quality of Medicinal Products", 2014. Vol. 3. 732 p.
Additional literature for in-depth study of the educational component	1. State Pharmacopoeia of Ukraine / SE "Ukrainian Scientific Pharmacopoeia Center for the Quality of Medicinal Products". 1st edition Kharkiv: State Enterprise "Ukrainian Scientific Pharmacopoeial Center for the Quality of Medicines", 2014. Vol. 2. 724 p. 2. State Pharmacopoeia of Ukraine / SE "Ukrainian Scientific Pharmacopoeia Center for the Quality of Medicinal Products" 2nd ed. Kharkiv: State enterprise "Ukrainian Scientific Pharmacopoeia Center for the Quality of Medicinal Products". 2015. Vol. 1. 1128 p. 3. Dysmenorrhea and endometriosis in the adolescent - AGOG Committee Opinion No. 760 // American College of Obstetricians and Gynecologists . J. Obstet . Gynecol . 2018. 132. R. 249 -258. 4. Ernst E. Homeopathy : what does the " best " evidence tell us ? Medical Journal of Australia . 2019. Vol . 192. P. 458-460.
Current electronic information resources (magazines, websites) for in-depth study of the educational component	1. atl.nuph.edu.ua - website of the Department of Pharmacy Technology of Medicines 2. Scientific library of the National Academy of Sciences : Access mode: http://lib.nuph.edu.ua 3. www.moz.gov.ua is the official website of the Ministry of Health of Ukraine 4. nuph.edu.ua is the official website of the National Pharmaceutical University 5. library@nuph.edu.ua - website of the library of the National Academy of Sciences of Ukraine 6. The site of distance learning of the National Academy of Sciences of the Russian Academy of Sciences : the page of the ATL department - [Electronic resource]. – Access mode: http://pharmel.kharkiv.edu/moodle/course/ 7. Compendium: medicinal preparations. - [Electronic resource]. - Access mode: http://compendium.com.ua/ - as of August 28, 2024. 8. State Register of Medicinal Products of Ukraine. - [Electronic resource]. - Access mode: http://www.drlz.com.ua/ - as of August 28, 2024.
Moodle distance learning system	https://pharmel.kharkiv.edu/moodle/course/view.php?id=312

17. Material, technical and software support of the educational component:

Technical support - the laboratories are equipped with pharmacy furniture, equipment and devices for dosing and manufacturing pharmaceuticals (turntables for medicinal and auxiliary liquids , burette

machines, capsule machines, universal thermal cabinet ED-53 - 3 units, magnetic stirrers (BINDER, Germany) - 2 units ., Salent homogenizers 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 (R40003) microscope with Granum DCM 310 digital video camera, rotary evaporator , sterile filtration unit, LabAnakyt DM 0412 clinical centrifuge , GP-40 sterilizer - 1 unit, DE-10 distiller, PTS 3E device for determination solubility of suppositories (PHARMA TEST, Germany), cell PTSW 0 for determining the solubility of suppositories (PHARMA TEST, Germany), colorimeter medical, laboratory and auxiliary utensils, taro-capping materials, medicinal and auxiliary substances, LRS. Means of communication, access to the Internet, interactive whiteboard, computers - 57 units, printers - 15 units, scanner - 1 unit, Misubishi EX-10 multimedia projectors - 3 units.

Software: Microsoft Word, Excel, Power Point , Acrobat rider , Google Workspace for Education Standard, ZOOM, MOODLE.