

**SYLLABUS OF THE EDUCATIONAL COMPONENT  
ORGANIZATION AND ECONOMICS OF PHARMACY**  
for applicants for higher education of 4 year of study (4,10 year of study)  
of educational program «Pharmacy»  
in specialty “226 Pharmacy, industrial pharmacy”  
field of knowledge “ 22 Health Care”  
training for second (master's) level

**TEACHERS**



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**1. Name of higher education establishment and department:** National University of Pharmacy, Department of Social Pharmacy.

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**3. Website:** <http://socpharm.nuph.edu.ua>

**4. Information about teachers:**

*Tereshchenko Lyubov Volodymyrivna* – candidate of Pharmaceutical Sciences, Associate Professor, Associate Professor of the Department of Social Pharmacy. Experience of scientific and pedagogical activity – 10 years. Teaches disciplines "Introduction to Speciality", "Pharmaceutical Law and Legislation", "Organization and Economics of Pharmacy", "Social pharmacy". Research interests: research of leading experience countries of the world on the issues of informatization of the health care system (eHealth) and the introduction of the latest technologies in electronic prescription in Ukraine; solving problems of prescription drugs in modern conditions.

*Surikova Iryna Oleksandrivna* – candidate of Pharmaceutical Sciences, Assistant of the Department of Social Pharmacy. Experience of scientific and pedagogical activity – 5 years. Teaches disciplines: " Introduction to Speciality", "Pharmaceutical Law and Legislation", " Organization and Economics of Pharmacy", "Social pharmacy". Research interests: regulatory and legal regulation of medical and pharmaceutical activities, the formation of the principles of social pharmacy in domestic practice.

**5. Consultations** take place in an online format according to the teachers' schedule posted on the department's website.

**6. Brief summary of the educational component:** the modern development of pharmacy requires specialists in the field to have a fairly high level of knowledge and creative initiative, to possess the norms of pharmaceutical legislation and effective computer technologies in order to provide quality pharmaceutical care to the population. The educational component "Organization and economics of pharmacy" is one of the most important profile disciplines that forms in future specialists the professionally necessary knowledge, skills and abilities in the field of planning, organization, analysis, control and accounting of the activities of pharmacy institutions regarding the organization of providing quality pharmaceutical care to the population. a feature of the discipline is its dynamism in view of changes in the socio-economic and political situation in the country, market conditions, and changes in legislation.

**7. The purpose statement of studying the educational component:** formation of knowledge about the organization of the work of a pharmacy as a health care and trade institution; the structure and functions of the

pharmacy; on the main issues of ensuring the sanitary and anti-epidemic regime of pharmacies; development trends of the pharmaceutical industry in the countries of the world and in Ukraine; formation of students' theoretical foundations and important professional skills in organizing the provision of medicines to the population.

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

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

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

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

PC 8. Ability to organize the activities of pharmacies to provide the population, health care institutions with medications and other products of the pharmacy range and implement appropriate reporting and accounting systems (management, statistical, accounting and financial) in accordance with the requirements of the National Medical Policy, Appropriate Pharmacy Practice (GPP) and to carry out commodity analysis, administrative record keeping while taking into account the organizational and legal norms of the pharmaceutical legislation.

PC 9. Ability to analyze and forecast the main economic indicators of the activity of pharmacies, to calculate the main taxes and fees, to form prices for medicines and medical products in accordance with the current legislation of Ukraine.

PC 12. Ability to use in professional activities the knowledge of regulations, legislation of Ukraine and recommendations of good pharmaceutical practices.

**9. Programmed learning outcomes (PLO):**

PLO 4. To 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.

PLO 5. To position your professional activities and personal qualities in the pharmaceutical labor market; to formulate the purposes of own activity taking into account public and industrial interests.

PLO 7. To perform professional activities using creative methods and approaches.

PLO 11. To use methods for assessing performance indicators; to identify re-serves to increase labor efficiency.

PLO 20. To carry out a set of organizational and managerial measures to provide the population and health care facilities with medicines and other products of the pharmaceutical range. To carry out all types of accounting in pharmacies, administrative records, processes of commodity analysis.

PLO 21. To calculate the main economic performance of pharmacies, as well as taxes and fees. To form all types of prices (wholesale, purchase and re-tail) for medicines and other products of the pharmaceutical range.

PLO 23. To take into account the data on socio-economic processes in society for the pharmaceutical provision of the population, determine the effective-ness and availability of pharmaceutical care in terms of health insurance and reimbursement of the cost of medicines.

PLO 24. To plan and implement professional activities on the basis of regulations of Ukraine and recommendations of good pharmaceutical practices.

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

**11. Prerequisites of the educational component:** the course is based on the study of "Introduction to the Specialty with introductory practice"; the course is the basis for the study of "Pharmaceutical marketing and management", "Pharmaceutical commodity science", "Social pharmacy", which involves the integration of teaching with the above educational components to form the skills to apply knowledge in the process of further training and in professional activities.

**12. The volume of the educational component:** 8 ECTS credits: 240 hours, 28 of them are lectures, 98 hours are practical. 114 hours individual work.

**13. Organization of training:**

**The format of teaching the educational component:** conducting lectures and practical classes for a better understanding of the topic.

**Content of the educational component:**

**Module 1**

***Content module 1. Organization of pharmaceutical providing to the population.***

***Organization of the pharmacy activity as a healthcare institution.***

Theme 1. Introduction into pharmacy practice. Modern approaches to the pharmacy practice.

Theme 2. Organization structure of pharmacy as a trading-production enterprise, nomenclature of staff positions in pharmacy.

Theme 3. Basic principles of organization of pharmaceutical aid for population. Main International Standards. GPP.

Theme 4. State regulation of pharmaceutical activity. Government control and regulation of pharmaceutical activity. Licensing in pharmaceutical industry.

Theme 5. A national drug policy as a common framework to solve problems in pharmaceuticals.

Theme 6. Pharmaceutical providing of population in the conditions of medical insurance.  
Theme 7. Organization of pharmaceutical care. Conception of responsible self-medication

***Content module 2. Pharmaceutical quality assurance system. Delivery of goods to pharmacies.  
Stock department.***

Theme 8. The Organization of prescription department in pharmacy. Rules of excerption and reception of recipes.  
Theme 9. Rules of pricing for different recipe forms. Determination of taxa laborum for the extemporal medications.  
Theme 10. The order of the turnover of the narcotic, psychotropic drugs and precursors. Accounting of these medicines. Organization of the prescribed ready-made drugs department activity.  
Theme 11. Organization of the quality control system of pharmaceutical products. The order of carrying out of the entrance control.  
Theme 12. Supply organization of pharmacy enterprises. Organization of work with commodity supplies. International rules INCOTERMS.  
Theme 13. The organization of the automatization and information work in pharmacy.

**Module 2**

***Content module 3. The system of the accounting in the pharmacy.***

Theme 1. Organization of the system of accounting and accounting in pharmacies (pharmaceutical firms).  
Theme 2. Accounting as an informative system of enterprises in pharmacy.  
ing. The main principles of the accounting in drugstore. Generally accepted accounting principles (GAAP).  
Theme 3. Kinds of account and their interrelations.  
Theme 4. The financial statements of the pharmacy.  
Theme 5. The financial statements of the pharmacy (second part).  
Theme 6. The accounting cycle. Accounting of cash flow in pharmacies (pharmaceutical firms).  
Theme 7. Bookkeeping transactions, their purpose and classification.  
Theme 8. The general ledger and trial balance of pharmacy. Adjusted trial balance. Worksheet. Closing entries.  
Theme 9. Forms and systems of a payment and the account of work and wages in pharmacies (pharmaceutical firms).  
Theme 10. Organization of inventory of commodities in pharmacies (pharmaceutical firms). Reporting of pharmacy establishments.  
Theme 11. Basic principles and methods of forming of the system of prices on medications.

***Content module 4. Modern methods of analysis and planning of trading-financial activity of pharmacies and pharmaceutical firms.***

Theme 12. Bases of pharmaeconomics: principles, calculations and methods. Analysis and planning of the main performance indicators of pharmacies.  
Theme 13. Description of economic trading-financial indicators of pharmacies and pharmaceutical firms. Economic analysis of sales and compounding.  
Theme 14. Planning of activity of pharmacies (pharmaceutical firms). Economic analysis of expenses of pharmacy.  
Theme 15. Economic analysis of trading imposing, profit, profitability  
Theme 16. Analysis of financial results of activity of enterprise on the basis of data of the financial reporting. Taxation of pharmacies (pharmaceutical firms). Audit of the financial reporting. Audit of calculations with budget.  
Theme 17. Financial-credit system in the conditions of market economy. Crediting of pharmacies.

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

*Control of knowledge in each lesson:* theoretical survey (oral or written), performance of a practical task (situational task, calculation task, preparation of accounting documents) in a work journal, checking independent work, solving test tasks on the subject of the lesson.

For topics 1-14: the minimum number of points is 2.5, the maximum is 6.

*Supervision of content modules:* oral survey, writing test tasks, solving situational (calculation) problems. For 1-2 semester: the minimum number of points is 7, the maximum is 12.

*Semester exam:* writing test tasks, solving situational (calculation) problems. Exam – maximum 100 points, minimum 60 points.

Distribution of points for each seminar class:

- Evaluation of theoretical knowledge (oral survey) – 2.5 points (50% of the grade for the class)
  - Assessment of practical abilities and skills (solving practical situational tasks) – 2.5 points (50% of the grade)
- Evaluation of theoretical knowledge, practical skills and abilities takes place according to the following criteria.

Assessment of theoretical knowledge	
Points (%)	Evaluation criteria
more than 75%	awarded to a higher education applicant who, when answering questions orally or in writing, has demonstrated comprehensive, systematized, in-depth knowledge of the program material, is able to competently interpret the obtained results; demonstrate knowledge of the main and additional literature provided for at the level of creative use
51% – 75%	is presented to the student of higher education, if during the oral or written answer to the question, the student of higher education showed full knowledge of the program material provided for at the level of similar reproduction, but made some insignificant errors
26% – 50%	issued if, during an oral or written answer to a question, the applicant of higher education revealed insufficient knowledge of the main program material, to the extent necessary for further study and work provided for by the program at the level of reproductive reproduction
up to 25%	is issued if, during an oral or written answer to a question, the student of higher education revealed serious gaps in knowledge of the basic material, made fundamental mistakes
Assessment of practical skills and abilities:	
Points (%)	Evaluation criteria
75%-100%	The practical task (situational task) was completed by the student of higher education independently without errors.
50%-75%	The practical task was completed independently, however, mistakes were made in calculations, principles of preparing multimedia materials, etc.
25%-50%	The practical task was completed independently, however, significant errors were made in calculations, principles of preparing multimedia materials, etc.
up to 25%	The student of higher education was unable to complete practical and situational tasks, did not issue a work journal.

Conditions for admission to semester supervision: a current rating of more than 60 points, absence of missed seminar classes, fulfillment of all requirements stipulated in the work program of the educational component.

### 15. Evaluation system of the educational component

The evaluation system for the educational component.

The results of the semester control in the form of a semester credit are evaluated on a 100-point, undifferentiated scale ("passed", "failed") and on the ECTS scale.

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

Types of evaluation	Maximum number of points (% of the number of points per module - for content modules)
<b>Module 1</b>	
Content module 1: Theoretical and applied principles of Organization of pharmaceutical providing to the population. - evaluation of topics (1-7) (work in classes 7-10): work in classes (oral survey, writing test tasks, solving situational (calculation) problems); - supervision of content module 1 (writing test tasks, solving situational (calculation) tasks)	45 (45 %)
Content module 2: Theoretical and applied principles of organization of the pharmacy activity as a healthcare institution. - evaluation of topics (9-14) (work in classes 10-13): work in classes (oral survey, writing test tasks, solving situational (calculation) problems); - supervision of content module 2 (writing test tasks, solving situational (calculation) tasks)	55 (55 %)
<b>Semester Supervision of Module 1</b>	100
<b>Module 2</b>	
Content module 3: Theoretical and applied principles of the system of the accounting in the pharmacy.	45 (45 %)

- evaluation of topics (1-11) (work in classes 7-12): work in classes (oral survey, writing test tasks, solving situational (calculation) problems); - supervision of content module 1 (writing test tasks, solving situational (calculation) tasks)	
Content module 4: Economical analysis in the pharmacy. - evaluation of topics (12-17) (work in classes 7-12): work in classes (oral survey, writing test tasks, solving situational (calculation) problems); - supervision of content module 2 (writing test tasks, solving situational (calculation) tasks)	55 (55 %)
Semester Supervision of Module 2	100

**The individual work of applicants for higher education is evaluated during the control of knowledge at each lesson and during the content module supervision.**

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

It is based on the principles of academic integrity stated in the POL "On measures to prevent cases of academic plagiarism at the National University of Pharmacy". Cheating during the evaluation of an applicant for higher education during supervision activities in practical (seminar, laboratory) classes, supervision of content modules and the semester exam is prohibited (including the use of mobile devices). Abstracts must have correct text references to the used literature. The detection of signs of academic dishonesty in the student's written work is a reason for the teacher not to credit it.

Class attendance policy. An applicant for higher education is obliged to attend classes (POL "On the organization of the educational process of the National University of Pharmacy ") 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 debts. The completion of missed classes by an applicant for higher education is carried out in accordance with the POL "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 POL "On the procedure for evaluating the results of training of applicants for higher education at the National University of Pharmacy ". 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 late without valid reasons are assessed at a lower grade - up to 20% of the maximum number of points for this type of work.

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 POL "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 educational component:**

<b>The main reading suggestions</b>	Methodological developments for classroom work (multimedia materials, lecture texts), which are posted on the website of distance learning technologies of the National Pharmaceutical University:
<b>Supplementary reading suggestions for in-depth study of the educational component</b>	<ol style="list-style-type: none"> <li>1. Joint FIP/WHO guidelines on good pharmacy practice: standards for quality of pharmacy services from the WHO technical report series, No. 961, 45th report of the WHO Expert Committee on specifications for pharmaceutical preparations © World Health Organization 2011</li> <li>2. Directive 2001/83/EU of the European Parliament and the Council of the EU dated 06.11.2001 "On the consolidation of Community legislation on medicinal products for humans".</li> <li>3. Thomas R. Ittelson. Financial Statements: A Step-by-Step Guide to Understanding and Creating Financial Reports / – August 15, 2009. - P.284.</li> <li>4. The legal and regulatory framework for community pharmacies in the European Region//report WHO//accesses WHO <a href="https://apps.who.int/iris/bitstream/handle/10665/326394/9789289054249-eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/326394/9789289054249-eng.pdf</a>.</li> <li>5. The WHO Model Lists of Essential Medicines (current and previous) are available on the WHO EMP website at: <a href="http://www.who.int/medicines/publications/essentialmedicines/en/">http://www.who.int/medicines/publications/essentialmedicines/en/</a>.</li> </ol>

<p><b>Current electronic information resources (magazines, websites) for in-depth study of the educational component</b></p>	<ol style="list-style-type: none"> <li>1. Association Agreement between the European Union and Ukraine. Government portal. Available at: <a href="https://www.kmu.gov.ua/en/yevropejska-integraciya/ugoda-prososciacyu">https://www.kmu.gov.ua/en/yevropejska-integraciya/ugoda-prososciacyu</a>.</li> <li>2. International Pharmaceutical Federation (FIP): <a href="https://www.fip.org">https://www.fip.org</a></li> <li>3. Science library of NUPh: <a href="http://dspace.ukrfa.kharkov.ua">http://dspace.ukrfa.kharkov.ua</a>; <a href="http://lib.nuph.edu.ua">http://lib.nuph.edu.ua</a>.</li> <li>4. State Expert Center of the Ministry of Health of Ukraine: <a href="https://en.moz.gov.ua/article/news/the-state-expert-center-of-the-ministry-of-health-of-ukraine-has-received-the-official-status-of-ich-observer">https://en.moz.gov.ua/article/news/the-state-expert-center-of-the-ministry-of-health-of-ukraine-has-received-the-official-status-of-ich-observer</a><a href="https://www.apteka.ua">https://www.apteka.ua</a> – офіційний сайт щотижневика «Аптека»</li> <li>5. Ministry of Health of Ukraine: <a href="https://en.moz.gov.ua">https://en.moz.gov.ua</a></li> <li>6. State Service of Ukraine on Medicines and Drugs Control. Site: <a href="https://www.dls.gov.ua/en/state-service-of-ukraine-on-medicines-and-drugs-control/">https://www.dls.gov.ua/en/state-service-of-ukraine-on-medicines-and-drugs-control/</a></li> <li>7. Ukrainian Scientific Pharmacopoeial Center for Quality of Medicines: <a href="http://sphu.org/en/about-us">http://sphu.org/en/about-us</a></li> <li>8. World Health Organization (WHO): <a href="https://www.who.int">https://www.who.int</a></li> </ol>
<p><b>Moodle distance learning system</b></p>	<p><a href="https://pharmel.kharkiv.edu/moodle/course/view.php?id=4063">https://pharmel.kharkiv.edu/moodle/course/view.php?id=4063</a></p>

**18. Technical and computer soft:** computer for testing, multimedia, screen, video conferencing software ZOOM, modular object-oriented dynamic learning environment MOODLE 3.9.8.