



**MINISTRY OF HEALTH OF UKRAINE**  
**NATIONAL UNIVERSITY OF PHARMACY**  
**Department of Clinical Pharmacology and Clinical Pharmacy**

**WORK PHARMACEUTICAL PLACEMENT**  
**IN CLINICAL PHARMACY AND PHARMACEUTICAL CARE**

(the name of educational component)

**WORK PROGRAM**  
**of educational component**

training for

**Master**

(Higher Educational Level Name)

in specialty

**226 Pharmacy, Industrial Pharmacy**

(Code and Specialty name)

field of knowledge

**22 Public health**

(Code and Knowledge Field Name)

of educational program

**Pharmacy**

(Language of Instruction — English)

(Educational Program Title)

in specialization(s)

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(Name of specialization, if available)

The work program of the educational component «Work Pharmaceutical Placement in Clinical Pharmacy and Pharmaceutical Care» in specialty «226 Pharmacy, industrial pharmacy» educational program «Pharmacy» in specialization(s)\_\_\_\_\_ - \_\_\_\_\_ for applicants for higher education 5<sup>th</sup> year of study.

EDUCATIONAL COURSE TEAM: ZUPANETS Kateryna, Head of Department of Clinical Pharmacology and Clinical Pharmacy NUPh, Doctor of Pharmacy, Professor;  
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(Enter the printed name and academic rank of the authors)

Work program has been considered and approved at the Meeting of the Department of Clinical Pharmacology and Clinical Pharmacy of NUPh.

Record from «02» September 2022 # 1

Acting Head of the Department

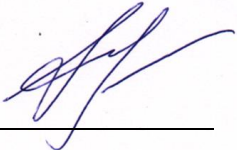


Prof. Tetyana SAKHAROVA

The work program has been approved at the Meeting of the Methodical Committee on Biomedical Disciplines of NUPh.

Record from «12» September 2022 # 1

Head of the Specialized Committee



Prof. Nadia KONONENKO

## **1. Description of the educational component**

**Language of study:** English

**Status of the educational component:** compulsory

*Clinical pharmacy is the integrative applied science, combining the pharmaceutical and clinical aspects of pharmacology, the main task of which is to provide a reliable theoretical basis and methodological approaches to the rational use of medicines.*

«Work Pharmaceutical Placement in Clinical Pharmacy and Pharmaceutical Care» is obligatory educational component, which consolidates the theoretical knowledge and practical skills in the field of clinical medicine and clinical pharmacology, analysis of pharmacotherapy, selection of the most rational drug and their combinations for a particular patient, contributes to the formation of skills to apply knowledge of clinical pharmacy in professional activities during the pharmaceutical care provide.

The subject of educational component study is the algorithm of pharmaceutical care during the dispensing prescribed or non-prescribed drugs, advisory and information work at a pharmacy, as well as work on the prevention and monitoring of possible side effects or ineffectiveness of medicines.

**Prerequisites for studying the educational component:** The educational component «Work Pharmaceutical Placement in Clinical Pharmacy and Pharmaceutical Care» is based on the study of biology and genetics fundamentals, physiology and human anatomy, microbiology with immunology fundamentals, pathological physiology, biochemistry, pharmacology, laboratory diagnostics, pharmacotherapy with pharmacokinetics, Clinical Pharmacy and Pharmaceutical Care as well as a unit of chemical courses and medicine technology and integrates with these components.

**Information content of the educational component.** 6 ECTS credits, 180 hours per educational component: 120 hours of practical classes and 60 hours of individual work.

## **2. Objectives and tasks of the educational component**

**The purpose of teaching the educational component** «Work Pharmaceutical Placement in Clinical Pharmacy and Pharmaceutical Care» is to consolidate the theoretical knowledge of Clinical Pharmacy and Pharmaceutical Care and acquire practical skills for their use in the process of carrying out pharmacy care for pharmacy visitors.

**The main tasks** of the educational component «Work Pharmaceutical Placement in Clinical Pharmacy and Pharmaceutical Care» are:

- acquisition of skills in Pharmaceutical Care during the release of OTC drugs;
- the acquisition of skills in determining the conditions for the rational use of prescription drugs
- the acquisition of skills in consultations on issues of compatibility with food, alcohol, other drugs, dosage regimen, and rules for the use of precise dosage form;
- acquisition of skills of an individual approach to each patient, taking into account the age-old criterion and severity of the disease on the basis of the principles of medical ethics and deontology.

## **3. Competency and planned educational outcomes**

The educational component «Work Pharmaceutical Placement in Clinical Pharmacy and Pharmaceutical Care» ensures the acquisition of applicants for higher education in the following **competences**:

**general**

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

**professional**

*PC 1.* Ability to conduct sanitary and educational work among the population to prevent common diseases, prevent dangerous infectious, viral, and parasitic diseases, as well as to facilitate the timely detection and maintenance of adherence to treatment of these diseases in accordance with their medical

and biological characteristics and microbiological characteristics.

*PC 2.* Ability to provide medical advice on prescription and over-the-counter medications and other products of the pharmacy range; pharmaceutical care during the selection and sale of the over-the-counter medications by assessing the risk/benefit, compatibility, indications, and contraindications based on data on the health of a particular patient, taking into account biopharmaceutical, pharmacokinetic, pharmacodynamic and physical and chemical characteristics of the medicine and other pharmaceutical product.

*PC 3.* Ability to provide first aid to patients and victims in extreme situations and emergencies.

*PC 4.* Ability to ensure the rational use of prescription and over-the-counter medications and other pharmaceutical products in accordance with physical, chemical, and pharmacological characteristics, biochemical, and pathophysiological features of a particular disease, and pharmacotherapeutic regimens of its treatment.

*PC 5.* Ability to monitor the effectiveness and safety of the population of medications according to the data on their clinical and pharmaceutical characteristics, as well as taking into account subjective signs and objective clinical, laboratory, and instrumental criteria for the examination of a patient.

*PC 13.* Ability to demonstrate and apply in practice communication skills, fundamental principles of pharmaceutical ethics and deontology, based on moral obligations and values, ethical standards of professional behavior and responsibility in accordance with the Code of Ethics for Pharmaceutical Workers of Ukraine and WHO guidelines.

Integrative final **program learning outcomes (PLO)**, the formation of which is facilitated by the educational component:

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 own 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 6. To argue information for decision-making, to be responsible for it in standard and non-standard professional situations; and to adhere to the principles of deontology and ethics in professional activities.

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

PLO 9. To carry out professional activities using information technology, «Information Databases», navigation systems, Internet resources, software, and other information and communication technologies.

PLO 10. To adhere to the norms of communication in professional interaction with colleagues, management, and consumers, work effectively in a team.

PLO 13. To carry out sanitary and educational work in professional activity in case of outbreaks of infectious, viral, and parasitic diseases.

PLO 14. To determine the advantages and disadvantages of medications of different pharmacological groups, taking into account their chemical, physical, and chemical, biopharmaceutical, pharmacokinetic, and pharmacodynamic features. To recommend to consumers over-the-counter medications and other products of the pharmaceutical range with the provision of counseling and pharmaceutical care.

PLO 17. To use the clinical, laboratory, and instrumental research data to monitor the efficacy and safety of medicines.

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

PLO 25. To promote health, including disease prevention, rational appointment, and use of medicines. To perform professional duties in good faith, and comply with the law on the promotion and advertising of medicines. To have psychological communication skills to build trust and understanding with colleagues, doctors, patients, and consumers.

As a result of studying the educational component, the applicant for higher education will be

*know:*

- the main operating orders and other normative documentation regarding the reception of prescriptions and the release of drugs from the pharmacy;
- modern assortment and classification of medicines;
- the list of OTC drugs authorized for use, nomenclature of OTC drugs;
- rules for the non-prescription delivery of medicinal products;
- characteristics of the most common disease clinical symptoms that are required for doctor's consultation;
- principles for collecting anamnesis, medical history;
- algorithm for choosing the optimal non-prescription drug for treatment diseases and pathological conditions at which self-treatment is possible;
- principles of pharmaceutical care for pharmacy visitors when dispensing an over-the-counter medication;
- categories of pharmacy visitors requiring special vigilance - (risk groups);
- organization of information and advisory work in the pharmacy;
- rules of occupational safety and all safety.

*be able to:*

- to use regulatory and reference literature on medicinal products;
- to be guided by the nomenclature of domestic and foreign medicines;
- to determine the category of patients among the pharmacy visitors, which requires a doctor's consultation;
- to determine among the visitors of the pharmacy the category of patients in which is possible self-medication;
- to classify medicines in the category of "prescription" and "non-prescription drugs";
- to advise pharmacy visitors on all issues related to medical therapy (both prescription and over-the-counter);
- collect anamnesis (illness, life, medical history);
- to choose the optimal non-prescription drug for a particular pharmacy visitor;
- to carry out the pharmaceutical care of the pharmacy visitors at the time of the issue of over-the-counter and prescription drugs;
- comply with labor and safety regulations.

*acquire:*

- skills for determining amongst the pharmacy visitors the category of patients who requires a doctor's consultation;
- skills to determine amongst visitors the pharmacy category of patients in which self-medication is possible;
- the skills of the definition of "prescription" and "non-prescription" medicinal products;
- counseling skills of pharmacy visitors on all issues relating to medical therapy (both prescription and non-prescription drugs);
- skills to collect anamnesis (illness, life, medical history);
- skills in choosing the optimal OTC for a particular pharmacy visitor;
- pharmacists' skills in carrying out pharmaceutical care when dispensing prescription and non-prescription drugs;
- skills of independent work with the sources of educational, scientific and additional literature;
- video, print and electronic sources search skills, work with Internet resources.

#### 4. The educational component structure

Names of content modules and topics	The amount of hours			
	the whole amount	including		
		lectu res	pract	self-study
<b>Content module 1.</b> Structure and principles of a pharmacy working; organizing the pharmacist work in a pharmacy. Work in a pharmacy at the pharmacist’s workplace – «at the first table»				
<b>Topic 1.</b> Purpose, tasks, and content of practice. Basic principles of medical deontology and ethics.	20	-	13	7
<b>Topic 2.</b> Pharmaceutical care in the symptomatic treatment of diseases of the digestive system.	22	-	15	7
<b>Topic 3.</b> Pharmaceutical care in the symptomatic treatment of colds. Prevention of colds.	22	-	15	7
<b>Topic 4.</b> Pharmaceutical care in the symptomatic treatment of joint and muscle pain, and headache.	22	-	15	7
<b>Topic 5.</b> Pharmaceutical care in the symptomatic treatment of traumatic, infectious, and parasitic lesions of the skin and its appendages.	22	-	15	7
<b>Topic 6.</b> Pharmaceutical care in the symptomatic treatment of central nervous system disorders.	22	-	15	7
<b>Topic 7.</b> Pharmaceutical care during drug and non-drug treatment of local blood circulation disorders.	22	-	15	7
<b>Topic 8.</b> Pharmaceutical care when dispensing OTC drugs for the elimination and prevention of vitamin deficiency.	22	-	15	7
<b>The whole amount of hours for the content module 1</b>	174	-	118	20
<b>Semester differentiated credit from Module 1</b>	6	-	2	4
<i>The whole amount of hours for the course</i>	<b>180</b>	-	<b>120</b>	<b>60</b>

#### 5. Content of the educational component

*Content module 1. Structure and principles of a pharmacy working; organizing the pharmacist work in a pharmacy. Work in a pharmacy at the pharmacist's workplace – «at the first table».*

**Topic 1. Purpose, tasks, and content of practice. Basic principles of medical deontology and ethics.** The structure and principles of the work of the pharmacy institution, the organization of work of the pharmacist at the pharmacy institution, and the equipment of the pharmacist's working place. The basic principles of medical deontology, ethical norms of pharmacist behavior in the pharmacy, and the relationship between the pharmacist and the pharmacy visitor. Organization of consulting and informational work in the pharmacy.

**Topic 2. Pharmaceutical care in the symptomatic treatment of diseases of the digestive system.** Pharmaceutical care in the release of OTC drugs for symptomatic treatment of diseases of the digestive system (heartburn, fascination, diarrhea, flatulence, nausea), informing patients about the conditions of rational use of drugs, their combination with food, rules of preservation, etc. Principles of pharmaceutical care at the release of prescription drugs for treating diseases of the digestive system. Features of symptomatic treatment of diseases of the digestive system in the decreed categories of visitors of pharmacies.

**Topic 3. Pharmaceutical care in the symptomatic treatment of colds. Prevention of colds.** Pharmaceutical care in the release of OTC drugs for the symptomatic treatment of colds (sore throat, cough, rhinitis, fever), informing patients about the conditions of rational use of drugs, their combination with food, rules of preservation, etc. Principles of pharmaceutical care at the release of prescription drugs for the treatment of diseases of the broncho-pulmonary system. Features of symptomatic treatment of colds in the decremented categories of pharmacy visitors. Pharmaceutical care for the prevention of colds.



**Topic 4. Pharmaceutical care in the symptomatic treatment of joint and muscle pain, and headache.** Pharmaceutical care in the release of OTC drugs for symptomatic treatment of joint and muscle pain. Principles of pharmaceutical care at the release of prescription drugs for the treatment of diseases of the musculoskeletal system. Pharmaceutical care of OTC and prescription drugs for symptomatic headache treatment. Informing patients about the conditions of rational use of medicines, their combination with food, rules of preservation, etc. Features of symptomatic treatment of pain syndrome in the decremented categories of pharmacy visitors.

**Topic 5. Pharmaceutical care in the symptomatic treatment of traumatic, infectious, and parasitic lesions of the skin and its appendages.** Pharmaceutical care in the release of non-prescription drugs for symptomatic treatment of skin lesions: microtraumas (cuts, saddles, scratches), thermal and chemical damage to the surface layers of the skin (care, frostbite), herpes lip, superficial mycosis, acne (acne), seborrhea, co-growth, pediculosis; informing patients about the conditions of rational use of drugs, their combination with food, rules of preservation, etc. Principles of pharmaceutical care at the release of prescription drugs for the treatment of infectious diseases of the skin. Features of symptomatic treatment of traumatic, infectious, and parasitic lesions of the skin and its dermatologists in the decremented categories of pharmacy visitors.

**Topic 6. Pharmaceutical care in the symptomatic treatment of central nervous system disorders.** Pharmaceutical care in the release of OTC drugs for the symptomatic treatment of diseases of the nervous system (anxiety, asthenia, and insomnia); informing patients about the conditions of rational use of drugs, their combination with food, rules of preservation, etc. Principles of pharmaceutical care in the release of prescription drugs for the treatment of disorders of the central nervous system. Non-medicated methods for treatment of diseases of the nervous system (anxiety states, asthenia, and insomnia). Features of symptomatic treatment of anxiety and insomnia in the decremented categories of pharmacy visitors.

**Topic 7. Pharmaceutical care during drug and non-drug treatment of local blood circulation disorders.** Pharmaceutical care in the delivery of OTC drugs for symptomatic treatment of local blood circulation disorders (varicose veins, hemorrhoids); informing patients about the conditions of rational use of drugs, their combination with food, rules of preservation, etc. Nonmedicated methods for eliminating the symptoms of local blood disorders. Features of symptomatic treatment of local blood disorders in decremented categories of pharmacy visitors.

**Topic 8. Pharmaceutical care when dispensing OTC drugs for the elimination and prevention of vitamin deficiency.** Pharmaceutical care in the delivery of OTC drugs for prevention and elimination of vitamin A deficiency; informing for patients about the conditions of rational use of drugs, their combination with food, preservation rules, etc. Features of symptomatic treatment of vitamin deficiency in the decremented categories of pharmacy visitors.

#### SEMESTER DIFFERENTIATED CREDIT

**6. Topics of lectures** – Not provided by curriculum.

**7. Topics of seminars** — Not provided by curriculum.

#### 8. Topics of practical lessons

№	Name of topic	Hours
1	<b>Topic 1.</b> Purpose, tasks, and content of practice. Basic principles of medical deontology and ethics.	13
2	<b>Topic 2.</b> Pharmaceutical care in the symptomatic treatment of diseases of the digestive system.	15
3	<b>Topic 3.</b> Pharmaceutical care in the symptomatic treatment of colds. Prevention of colds.	15
4	<b>Topic 4.</b> Pharmaceutical care in the symptomatic treatment of joint and muscle pain, and headache.	15

№	Name of topic	Hours
5	<b>Topic 5.</b> Pharmaceutical care in the symptomatic treatment of traumatic, infectious, and parasitic lesions of the skin and its appendages.	15
6	<b>Topic 6.</b> Pharmaceutical care in the symptomatic treatment of central nervous system disorders.	15
7	<b>Topic 7.</b> Pharmaceutical care during drug and non-drug treatment of local blood circulation disorders.	15
8	<b>Topic 8.</b> Pharmaceutical care when dispensing OTC drugs for the elimination and prevention of vitamin deficiency.	15
9	<b>Semester differentiated credit from Module 1</b>	2
<b>The whole amount of hours</b>		<b>120</b>

## 9. Topics of laboratorial lessons — Not provided by curriculum.

## 10. Self-study work

№	Name of topic	Hours
1	<b>Topic 1.</b> Purpose, tasks, and content of practice. Basic principles of medical deontology and ethics.	7
2	<b>Topic 2.</b> Pharmaceutical care in the symptomatic treatment of diseases of the digestive system.	7
3	<b>Topic 3.</b> Pharmaceutical care in the symptomatic treatment of colds. Prevention of colds.	7
4	<b>Topic 4.</b> Pharmaceutical care in the symptomatic treatment of joint and muscle pain, and headache.	7
5	<b>Topic 5.</b> Pharmaceutical care in the symptomatic treatment of traumatic, infectious, and parasitic lesions of the skin and its appendages.	7
6	<b>Topic 6.</b> Pharmaceutical care in the symptomatic treatment of central nervous system disorders.	7
7	<b>Topic 7.</b> Pharmaceutical care during drug and non-drug treatment of local blood circulation disorders.	7
8	<b>Topic 8.</b> Pharmaceutical care when dispensing OTC drugs for the elimination and prevention of vitamin deficiency.	7
9	<b>Semester differentiated credit from Module 1</b>	4
<b>The whole amount of hours</b>		<b>60</b>

Self-study work includes work with the literature, and report practice design.

## 11. Criteria and evaluation order of educational outcomes

The success of each student is assessed on a 100-point rating scale and has a definition based on the ECTS system and the traditional scale adopted in Ukraine. The criteria for evaluating the results of the practice and the assessment scale are given in the table.

The maximum number of points assigned to the applicant upon mastering the module (credit) is 100, including 60 points for the current educational activity (current control) and 40 points for the results of the semester control.

The minimum number of points awarded by the higher education institution for the assimilation of the module (credit) is 60, including 36 points for the current educational activity (current control), and 24 points for the results of the semester control.

Points for the module		
traditional assessment	current control points	content module control points
excellent	54-60	36-40
good	45-53	30-35
satisfactory	36-44	24-29
unsatisfactory	0-35	0-23

The criteria for evaluating the results of the practice and the assessment scale are given in the table.



**Evaluation of the results  
of Work Pharmaceutical Placement in Clinical Pharmacy and Pharmaceutical Care**

<b>Criteria</b>	<b>Current control</b>	<b>Module control</b>
Correct completion and full registration of the report and practice diary	6-10	–
Correct and complete performance of the curriculum tasks (30 practical situations for a 0.6-1 point)	18-30	–
Correct and complete performance of the curriculum tasks (information about 4 medicinal products for 1.5-2.5 points)	6-10	–
Correct and complete performance of the curriculum tasks (an example of a prescription for a drug prescribed by a doctor for the treatment of a patient with hypertensive disease)	6-10	–
Ability to select patients for mandatory referral to a doctor or for the prescription of OTC drugs within the framework of responsible self-medication. The correctness of the choice of the pharmacological group and optimal OTC drug, dosage form and the route of administration for a particular visitor. Ability to provide alternative ways to address drug replacement issues, ways to eliminate polypharmacy (polypragmasia), and reduce the risk of adverse reactions. Ability to carry out pharmaceutical care of decreed categories of pharmacy visitors	–	24-40
<b>TOTAL</b>	<b>36-60</b>	<b>24-30</b>

**Current control** consists of checking the correctness and completeness of the assignment for the training program, the correctness of the membership registration report (diary) practice, and the systematic performance of daily work at the practice.

**Content module Control.** Applicants who completed all types of work pre-seen by the curriculum are admitted to the final control and scored at least 36 points for the current activity and presented the materials of practice: a diary of industrial practice and a report on industrial practice. The module control consists of checking the completeness and correctness of filling in the practice report and the oral questionnaire on controlling the acquisition of practical skills: the ability to carry out pharmaceutical care during the release of OTC drugs, to determine the conditions for the rational use of prescription drugs, to conduct consultations on questions of compatibility with food products, alcohol, other medicines, dosage regimen, rules for the use of a particular dosage form; to carry out pharmaceutical care of the decreed categories of pharmacy visitors.

The maximum number of points for module control is 40. The module control is considered to be taken if the student scored at least 24 points.

The higher education applicant is graded according to the criteria listed in the table.

<b>Points</b>	<b>Evaluation criteria</b>
10	<b>Excellent</b> (Correct filling and complete design of the report and diary)
9	<b>Very good</b>
8	<b>Good</b>
7	<b>Satisfactorily</b>
6	<b>Enough</b>
5	<b>Unsatisfactory</b>

Grades A, B, C, D, and E are given only to applicants who are enrolled in the current control and semester control of the educational component. The number of points from the educational component is converted into a 4-point scale as follows:

<b>Rating assessment, points</b>	<b>Definition</b>
90-100     A	excellent
82-89     B	good
74-81     C	
64-73     D	satisfactory
60-63     E	

<b>Rating assessment, points</b>		<b>Definition</b>
35-59	F	unsatisfactory with the possibility of repeated pass
1-34	FX	unsatisfactory with an obligatory repeated course (additional work is necessary)

Applicants can get A, B, C, D, and E rates if they were granted credits for all modules of the educational component.

Applicants can get FX or F if they weren't granted at least one module of the educational component after completing their studies.

The FX ("2") is graded to applicants who have received the minimum quantity of points on the current academic activity but did not pass a content module control. They have the right to repeat the control test no more than 2 times within 2 weeks after the end of the semester according to the schedule approved by the rector.

Applicants who have got an F (they did not complete a program at least one module or did not get the minimum quantity of points for the current academic activity) should repeat the course according to an individual curriculum.

## **12. Form of progress and semester supervision of academic achievements**

Semester differentiated credit.

## **13. Methodological Support**

- 1) Educational work program on an educational component.
- 2) Work program on an educational component.
- 3) Syllabus of an educational component.
- 4) Learning success assessment system.
- 5) Methodological recommendations for educational component.
- 6) Report on the Work Pharmaceutical Placement in Clinical Pharmacy and Pharmaceutical Care (workbook).
- 7) Textbooks, guidelines, atlases, handbooks, manuals.

## **14. Reading suggestions**

### **The main reading suggestions**

- 1) Report on the Work Pharmaceutical Placement in Clinical Pharmacy and Pharmaceutical Care [Electronic source] : workbook / S. V. Misiurova [et al.], 2023. – 48 с.
- 2) The practice in clinical pharmacy : method. recommend. [Electronic source] / K. O. Zupanets, S. V. Misiurova, K. L. Ratushna, et al ; ed. I. A. Zupanets, 2020. – 36 p.
- 3) Pharmaceutical care: basic concepts and definitions [Text] : methodological recommendation for in-class work of students / S. B. Popov [et al.] ; ed. by prof. I. A. Zupanets, 2020. – 24 p.
- 4) Pharmaceutical care when dispensing drugs for the symptomatic treatment of the CNS episodic disorders (anxiety, insomnia) [Text] : methodological recommendation for in-class work of students / T. S. Sakharova [et al.] ; ed. by prof. I. A. Zupanets, 2020. – 36 p.
- 5) Introduction in Clinical Pharmacy: Adverse Drug Reactions [Text] : methodological recommendations for in-class work of students / I. A. Otrishko [et al.] ; ed. by I. A. Zupanets ; translated by O. S. Popov, 2018. – 31 p.

### **Supplementary reading suggestions**

- 1) *Applied Therapeutics : The Clinical Use Of Drugs* / ed. by Caroline S. Zeind, Michael G. Carvalho. – 11<sup>th</sup> ed. – New York : Wolters Kluwer ; Lippincott Williams & Wilkins, 2018. – 2379 p.

- 2) *British Medical Association. New Guide to Medicines and Drugs.* – 9<sup>th</sup> ed. – London : Dorling Kindersley, 2015. – 512 p.
- 3) *Clinical Pharmacy and Therapeutics.* – 6<sup>th</sup> ed. / Eds Cate Whittlesea and Karen Hodson. – London : Churchill Livingstone, 2019. – 1094 p.
- 4) *Harrison's Principles of Internal Medicine* / L. J. Jameson [et al.]. – 20<sup>th</sup> ed. – McGraw Hill Professional, 2018. – 4048 p.
- 5) *Oxford Handbook of Clinical Pharmacy Third Edition* / eds Ph. Wiffen. M. Mitchell, M. Snelling, N. Stoner. – Oxford : Oxford University Press, 2017. – 730p.
- 6) *Symptoms in the Pharmacy : A Guide to the Management of Common Illness.* – 8<sup>th</sup> ed. / Ed. A. Blenkinsopp, M. Duerden and J. Blenkinsopp. – Oxford : John Wiley & Sons Ltd, 2018. – 405 p.

## **15. Electronic Resources, including the Internet**

- 1) Drugs.com. Prescription Drug Information, Interactions and Side Effects [Electronic resource]. – Access mode: <https://www.drugs.com/> (Date of access: 01.09.2022). – The name from the screen.
- 2) FDA Approved drug products [Electronic resource] // Federal Drug Administration. – Access mode: <https://www.accessdata.fda.gov/scripts/cder/daf/> (Date of access: 01.09.2022). – The name from the screen.
- 3) Medicines [Electronic resource] // European Medicines Agency. – Access mode: <https://www.ema.europa.eu/en/medicines> (Date of access: 01.09.2022). – The name from the screen.
- 4) *Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations* [Electronic resource]. – Access mode: <https://www.accessdata.fda.gov/scripts/cder/ob/index.cfm> (Date of access: 01.09.2022). – The name from the screen.
- 5) *Rxlist.* The Internet Drug Index for prescription drug information, interactions and side effects [Electronic resource]. – Access mode: <https://www.rxlist.com/> (Date of access: 01.09.2022). – The name from the screen.
- 6) <https://pharmel.kharkiv.edu/moodle/course/view.php?id=24>
- 7) <https://pharmel.kharkiv.edu/moodle/course/view.php?id=2731>