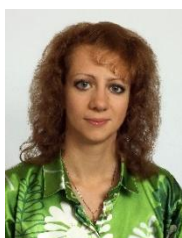


SYLLABUS OF THE EDUCATIONAL COMPONENT
Pharmacotherapy with pharmacokinetics
(the name of the educational component)

for applicants for higher education of 4 year of study full-time form of education
(4.10 year of study)
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)

TEACHER



Zhabotynska
Nataliia

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- 1. The name of higher education establishment and department:** the National University of Pharmacy, Department Pharmacology with Pharmacotherapy
- 2. Address of the department:** c. Kharkiv, str. Kulikovska, 12, (057) 706-30-69.
- 3. Web site of the department:** <https://pharmacolpharmacother.nuph.edu.ua/>
- 4. Information about teachers:**

Zhabotynska Nataliia

PhD of medicine, Associate Professor of the Department Pharmacology with Pharmacotherapy of National University of Pharmacy, Master of Pedagogy of Higher Education, the highest category physician. Experience of scientific and pedagogical work is 18 years. Experience of professional work is 23 years. She teaches educational components: "Pharmacotherapy with Pharmacokinetics", "First Aid and Introductory Medical Practice", "Extreme Medicine". Scientific interests: pharmacotherapy, nephrology, pedagogy of higher education.

5. Consultations: take place every Wednesday from 17.00 to 18.00 in online format.

6. Brief summary of the educational component: The educational component "Pharmacotherapy with Pharmacokinetics" is the compulsory subjects for the second (master's) level in the specialty "226 Pharmacy, Industrial pharmacy" (for foreign students studying in English) educational program «Pharmacy», term of study 4 years 10 month. Semester supervision is in the form of a semester credit

7. The purpose statement of studying the educational component: to teach students the basic principles and directions of modern rational pharmacotherapy of the most common diseases of different organs and systems, based on the principles of evidence-based medicine and international clinical guidelines providing medical care.

8. Competences in accordance with the educational program:

Soft- skills / General competences (CG):

GC 2. Ability to apply knowledge in practical situations, make reasonable decisions.

GC6. Knowledge and understanding of the subject area and understanding of professional activity.

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

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 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 physicochemical characteristics of the medicine and other pharmaceutical

products.

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

The program learning outcomes (PLO):

PLO 2. To apply knowledge of general and professional disciplines in professional activities.

PLO 14. To determine the advantages and disadvantages of medications of different pharmacological groups, taking into account their chemical, physicochemical, 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 16. To determine the influence of factors influencing the processes of absorption, distribution, deposition, metabolism and excretion of the drug and due to the condition, features of the human body and physico-chemical properties of medications.

10. Status of the educational component: compulsory.

11. Prerequisites of the educational component: the study of the educational component "Pharmacotherapy with Pharmacokinetics" is based on the basic knowledge acquired by students of higher education during the study of such educational components as "Human anatomy", "Normal physiology", "Biology with the Basics of Genetics", "Microbiology with the Basics of Epidemiology", "Pathological physiology", "Pharmacology".

12. The volume of the educational component: 3,0 of ECTS credits, number of hours per educational component: general 90, lectures 8, practical classes 36, individual work 46.

13. Organization of training:

The format of teaching the educational component:

Content of the educational component:

Content module 1. General pharmacotherapy and pharmacokinetics issues. Methods of examination of the patient. Pharmacotherapy in neurology and cardiology

Topic 1. Basis pharmacotherapy and pharmacokinetics.

Topic 2. Pharmacotherapy of nervous system diseases.

Topic 3. Pharmacotherapy of cardiovascular diseases.

Control Content Module 1

Content module 2. Pharmacotherapy in Pulmonology, Phthysiology, Gastroenterology, Nephrology, Urology, Gynecology

Topic 4. Pharmacotherapy of respiratory diseases.

Topic 5. Pharmacotherapy of gastrointestinal diseases.

Topic 6. Pharmacotherapy of urinary tract diseases.

Control Content Module 2

Content module 3. Pharmacotherapy of skin, venereal, endocrine, allergic, rheumatic, hematologic, infectious diseases. Pharmacotherapy in pediatrics

Topic 7. Pharmacotherapy of skin diseases. Pharmacotherapy of sexually transmitted diseases. Pharmacotherapy of endocrine diseases.

Topic 8. Pharmacotherapy of systemic rheumatic diseases and pharmacotherapy of allergy diseases. Pharmacotherapy of infection diseases Pharmacotherapy of blood diseases.

Control Content Module 3

14. Forms and types of academic achievements supervision:

Forms and types of academic achievements supervision

Progress supervision: oral survey, writing test tasks, solving situational problems.

Supervision of content modules: writing test tasks, solving situational problems.

Semester control form: semester differentiated credit.

Conditions for admission to the supervision of content modules: for admission to the supervision of content module 1, 2 and 3, it is necessary to have a minimum number of points for the topics (classes) of content module 1, 2 and 3 respectively.

Conditions for admission to semester supervision: a current rating of more than 60 points, absence of

missed practical classes, fulfillment of all requirements stipulated in the work program of the educational component.

15. Evaluation system of the educational component:

Evaluation system of the educational component:

The results of the semester supervision in the form of a semester differentiated credit are evaluated according to the ECTS scale, a 100-point scale and a four-point scale ("excellent", "good", "satisfactory", "unsatisfactory")

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

Types of evaluation	Maximum number of points (% of the number of points per module - for content modules)
Module 1	
<i>Content module 1: evaluation of topics (1-3):</i> - work in classes (oral survey, writing test tasks, solving situational problems); - <i>supervision of content module 1</i> (writing test tasks, solving situational tasks)	30 (30 %)
<i>Content module 2: evaluation of topics (4-6):</i> - work in classes (oral survey, writing test tasks, solving situational problems); - <i>supervision of content module 2</i> (writing test tasks, solving situational tasks)	30 (30 %)
<i>Content module 3: evaluation of topics (7-9):</i> - work in classes (oral survey, writing test tasks, solving situational problems); - <i>supervision of content module 3</i> (writing test tasks, solving situational tasks)	40 (40 %)
Semester Supervision of Module 1	100 (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:

The policy of the educational component ("rules of the game") is determined by the requirements of the department to the applicant for higher education when studying the educational component regarding academic integrity, regarding attending classes, regarding deadlines, working out, increasing the rating, liquidating academic debts, regarding contesting the evaluation of the educational component (appeals), etc. In this point, the Regulations and other normative documents of the National University of Pharmacy are specified, in accordance with which requirements are set for the applicant for higher education when studying the educational component and the policy of the department is formed.

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 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:

The main reading suggestions	1. Lectures of pharmacotherapy with pharmacokinetics: Tutorial for foreign students of higher education staff / I.V. Kiryev, N.V. Zhabotynska, O.A. Riabova at all. – Kharkiv : NUPH : 2019. – 140 p.
Supplementary reading suggestions for in-depth study of the educational component	<p>1. Barbara G. Wells, Joseph T. Dipiro, Terry L. Schwinghammer, Cecily V. Dipiro Pharmacotherapy handbook. 2017: 1164.</p> <p>2. John E. Murphy Clinical pharmacokinetics 7th Edition 2021:450</p> <p>3. Katzung B.G., & Vanderah T.W.(Eds.), (2021). Basic & Clinical Pharmacology, 15e. McGraw Hill. https://accessmedicine.mhmedical.com/content.aspx?bookid=2988&sectionid=250593594</p> <p>4. From applied clinical pharmacokinetics, second edition. Bauer L.A. (Ed.), (2015). Applied Clinical Pharmacokinetics, 3e. McGraw Hill. https://accesspharmacy.mhmedical.com/content.aspx?bookid=1374&sectionid=74719411</p> <p>5. Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention, 2023. Updated May, 2022. Available at: www.ginasthma.org.</p> <p>6. World Health Organization-International Society of Hypertension Guidelines for the Management of Hypertension. Guidelines Subcommittee. Feb 2018; 17(2):151-83.</p> <p>7. David N. Gilbert, Henry F. Chambers at all. The Sanford Guide to Antimicrobial Therapy 2023 (Pocket Edition) ISBN 10: 1944272232 ISBN 13: 9781944272234 P.339</p> <p>8. 2017 Infectious Diseases Society of America's Clinical Practice Guidelines for Healthcare-Associated Ventilator-Associated Pneumonia and Meningitis / A. R. Tunkel, R. Hasbun, A. Bhimraj et al. // Clin. Infect. Dis. – 2017. – Vol. 64, № 6. – P. 701–706.</p> <p>9. Emilio Perucca. Antiepileptic drugs: evolution of our knowledge and changes in drug trials. Epileptic Disorders. 2019; 21(4):319-329.</p>

	<p>doi:10.1684/epd.2019.1083</p> <p>10. ESCMID guideline: diagnosis and treatment of acute bacterial meningitis / D. van de Beek, C. Cabellos, O. Dzipova et al. // Clin. Microbiol. Infect. – 2016. – Vol. 22, Suppl. 3. – P. S37–S62.</p> <p>11. KDIGO 2021 Clinical Practice Guideline for the Management of Blood Pressure in Chronic Kidney Disease Cheung, Alfred K. et al. Kidney International, Volume 99, Issue 3, S1 - S87</p> <p>12. Guidelines for the management of chronic kidney disease / A. Levin, B. Hemmelgarn, B. Culleton et al. // CMAJ. – 2018. – Vol. 179, № 11. – P. 1154–1162.</p> <p>13. Sexually transmitted diseases treatment guidelines, 2021 / MMWR / July 23, 2021 / Vol. 70 / No. 4/ P. 135</p> <p>14. Malfertheiner P, Megraud F. At all. European Helicobacter and Microbiota Study group. Management of Helicobacter pylori infection: the Maastricht VI/Florence consensus report. Gut. 2022 Aug 8;gutjnl-2022-327745. http://doi.org/10.1136/gutjnl-2022-327745.</p>
Current electronic information resources (magazines, websites) for in-depth study of the educational component	<p>1. NFaU. Online tests. Preparation for independent testing of KPOK [Electronic resource] / National University of Pharmacy. – Access mode: http://tests.nuph.edu.ua/</p> <p>2. NPhaU Library: [Electronic resource] / National University of Pharmacy. – Access mode : http://lib.nuph.edu.ua/?lng=uaHΦaY</p> <p>3. Distance education [Electronic resource] / National University of Pharmacy. – Access mode: https://pharmel.kharkiv.edu/moodle/</p> <p>4. Website of the Department of Pharmacology and Pharmacotherapy https://pharmacolpharmacother.nuph.edu.ua/en/</p>
Moodle distance learning system	https://pharmel.kharkiv.edu/moodle/course/view.php?id=2689

18. Technical support and software of the educational component: multimedia projector, presentations.