

MINISTRY OF HEALTH OF UKRAINE  
KHARKIV NATIONAL MEDICAL UNIVERSITY  
Department of Clinical Pharmacology and Internal Medicine

Academic year 2021-2022

**SYLLABUS OF EDUCATIONAL COURSE  
«AGE ASPECTS OF PHARMACOTHERAPY»**

Elective component

Form of education: full-time, distance, mixed

Branch of knowledge 22 " Health Protection "

Specialty 222 «Medicine»

Educational program for education of specialists of the second (master's)  
level of higher education course

Course of education- 5

Syllabus of the academic discipline was  
approved at the meeting of the  
Department of Clinical Pharmacology  
and Internal Medicine

Approved by the methodical  
commission of KhNMU on the problem  
of professional training of disciplines of  
therapeutic profile

Protocol from  
"27" August 2021 No. 1

Protocol from  
"31" August 2021 No. 1

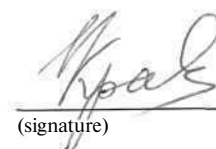
The head of the Department of Clinical  
Pharmacology and Internal Medicine



(signature)

prof. Knyazkova I.I.  
(surname)

The Head of methodical commission



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prof. Kravchun P.G.  
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**Developers of the syllabus:**

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Consultations	According to the schedule of the educational department

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Consultations	According to the schedule of the educational department

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Full-time consultations schedule and place according to the schedule of the department.

On-line consultations, schedule and place by prior arrangement with the teacher.

**Location: classes are held on the base of the polyclinic** Government Institution "L.T.Malaya Therapy National Institute of the National Academy of Medical Sciences of Ukraine" (GI "L.T.Mala NIT NAMSU") (Lyubov Malaya Avenue, 2A, Kharkiv, Kharkiv region, 61039)

## INTRODUCTION

The syllabus of the discipline " Age Aspects of Pharmacotherapy " is compiled in accordance with the educational-professional program (hereinafter - EPP) "Medicine" and the Standard of Higher Education of Ukraine (hereinafter - the Standard), the second (master's) level, field of knowledge 22 "Health Protection".

The program of the course determines the prerequisites for access to learning, orientation and the main focus of the program, the amount of ECTS credits required to obtain an educational master's degree, a list of general and special (professional) competencies, the normative and variable content of specialist training, formulated in terms of learning outcomes and control requirements quality of higher education.

The department accepts qualified students of any race, national or ethnic origin, gender, age, persons with special needs, any religion, sexual orientation, gender identity, veteran status or marital status for all rights, privileges, programs and activities provided to university students.

Page of educational course in Moodle:  
<http://31.128.79.157:8083/course/view.php?id=3044>

### **Description of the discipline (abstract).**

The course in Age Aspects of Pharmacotherapy is designed for 5th year medical students. During the course, practical classes are held, covering a wide range of important medical issues. Age Aspects of Pharmacotherapy includes the studying of of pharmacokinetics, pharmacodynamics and features of the use of drugs in children, elderly people, pregnant and lactating women

Difficulties in the treatment of elderly patients are associated with a significant number of comorbidities and the peculiarities of the action of drugs (drugs) in the elderly.

In addition, the use of modern highly effective drugs in pediatrics also requires in-depth study of the peculiarities of the action of drugs in childhood, including pharmacodynamics, pharmacokinetics, drug interactions. When prescribing therapy, it is always necessary to take into account the age of the sick child, to conduct a special calculation of drug dosage, to assess the possibility of side effects of drugs and other factors that are crucial for the effectiveness and safety of treatment.

Knowledge of Age Aspects of Pharmacotherapy is based on both experimental data and theoretical positions of pharmacology and other medical and biological sciences, and on the actual material of clinical disciplines.

**Discipline status:** the main format of the discipline is mixed - the course, which is supported in the Moodle system, teaching the course, provides for a combination of traditional forms of classroom studding with elements of distance studding, which uses available information interactive technologies (Google Meet, Google Teams, ZOOM, Moodle), resident and correspondence counseling.

**The subject of study of the discipline** "Age aspects of pharmacotherapy" is the study of the effects of drugs on the human body of different ages, the study of pharmacokinetics, pharmacodynamics of drugs in patients of different ages, methods of monitoring the effectiveness and safety of drugs.

### **Interdisciplinary links**

- a) "Age aspects of pharmacotherapy" is based on the study of medical biology, normal and pathological physiology, microbiology, medical chemistry, pharmacology, clinical pharmacology, clinical disciplines, laboratory and functional diagnostics by graduates of higher medical education and integrates with these disciplines;
- b) lays the foundations for students to study clinical disciplines, which involves the integration of teaching with these disciplines and the formation of skills to apply knowledge of clinical pharmacokinetics and pharmacodynamics in the process of further study and professional activities;
- c) lays the foundations for the formation of ideas about the general principles of drug therapy of major diseases and their individual manifestations in patients of different ages, as well as in women during pregnancy and lactation.

**Prerequisites.** The study of the discipline "Age aspects of pharmacotherapy" involves the prior mastering of disciplines in medical biology, normal and pathological anatomy, normal and pathological physiology, biochemistry, microbiology, propaedeutics, medical genetics, pharmacology and medical formulations, epidemiology and evidence-based principles of evidence. care, internal medicine, pharmacology, clinical pharmacology, pediatrics, as well as practical skills of care for geriatric and pediatric patients, their management in outpatient and inpatient settings.

**Postrequisites.** The main provisions of the discipline "Age aspects of pharmacotherapy" should be used in the study of related disciplines during the 6 years of study, is the basis for preparation for the licensing exam

### **Link from the Page of educational course in Moodle:**

<http://31.128.79.157:8083/course/view.php?id=3044>

## **1. The aim of teaching the discipline "Age Aspects of Pharmacotherapy"**

**1.1 The aim the discipline** is to train specialists who have sufficient theoretical knowledge and practical skills to conduct them drug therapy in a particular patient age, have a methodology for selecting them effective and safe drugs and their combinations, taking into account age of the patient, individual characteristics, the course and form of the disease, the presence of concomitant pathology, based on evidence-based medicine.

**1.2 The main objectives** of the discipline "Age Aspects of Pharmacotherapy" are the acquirement by students of competencies in accordance

with the general and professional competencies of the educational-professional program "Medicine" of the second (master's) level of higher education in 222 Medicine qualification Master of Medicine: understand the basic requirements and features of pharmacotherapy for patients of different ages, as well as women in special conditions - during pregnancy and lactation. Be able to determine the optimal dose, amount of drugs and the method of their administration, taking into account age and associated pathology/ ability to apply knowledge in practical situations, understanding of subjective and professional activity. Ability to adapt and act in new situations, acceptance in formed decision, ability to work in a team, act socially responsibly and consciously.

The discipline belongs to the elective disciplines.

The format of the discipline is mixed.

**Education methods.** To conduct classes, clinical (supervision of patients with appropriate to the topic age), electronic information (presentations, video materials, guidelines), scientific (participation in scientific developments in the course), control (tests, situational tasks, protocol of drug efficiency and safety, drugs prescription).

### **1.3 Results of the education.**

The course contains the main aspects of training a future doctor by "Medicine" specialty.

According to the educational program for the academic course "Age Aspects of Pharmacotherapy", an applicant for higher education will acquire theoretical knowledge, methodological education, practical skills in the following areas:

- rational drug therapy in a particular patient depending on age,
- methodology for selecting the most effective and safe drugs, as well as their combinations, taking into account individual characteristics, course and form of the disease, the presence of comorbidities, based on evidence-based medicine.
- principles of drugs interactions in patients of different age group,

#### **1.3.1. Integral competencies.**

The ability to solve typical and complex specialized tasks and practical problems in professional activities in the field of health care, or in the learning process, involves research and (or) implementation of innovations and is characterized by the complexity and uncertainty of conditions and requirements. The ability of an individual to organize an integral humanitarian educational space, to form a single image of culture or a holistic picture of the world.

#### **Common competencies**

CC 1 - Ability to abstract thinking, analysis and synthesis, the ability to learn and be modernly trained

CC 2 - Ability to apply knowledge in practical situations

CC 3 - Knowledge and understanding of the subject area and understanding of professional activity

CC 4 - Ability to adapt and act in a new situation

CC 5 - Ability to make an informed decision; work in a team; interpersonal skills

CC 6 - Ability to communicate in the state language both orally and in writing; ability to communicate in a foreign language

CC 7 - Skills in the use of information and communication technologies

CC 8 - Definiteness and persistence in terms of tasks and responsibilities

CC 9 - Ability to act socially responsibly and consciously

### **Special competencies**

SC 1 - Skills of interviewing of the patient

SC 2 - Ability to determine the required list of laboratory and instrumental studies and evaluate their results

SC 3 - Ability to establish a preliminary and clinical diagnosis of the disease

SC 4 - Ability to determine the required mode of work and rest, the nature of nutrition in the treatment of diseases

SC 5 - Ability to determine the principles and nature of treatment of diseases

SC 6 - Ability to diagnose emergencies

SC 7 - Ability to determine tactics and skills of emergency medical care

SC 14 - Ability to keep medical records

### **1.3.2 The study of the discipline ensures that students acquire the following program learning outcomes**

PLO 1 - to have general and special fundamental and professionally-oriented knowledge, skills, abilities, competencies necessary to perform typical professional tasks related to activities in the medical field in the relevant position

PLO 3 - to apply the acquired knowledge, skills and understanding to solve typical problems of the doctor, the scope of which is provided by lists of syndromes and symptoms, diseases, emergencies, laboratory and instrumental research, medical manipulations

PLO 4 - to collect information about the patient

PLO N 7 - to determine the nature and principles of treatment of diseases

PLO 17 - be able to keep medical records, process state, social and medical information

PLO 20 - apply the acquired knowledge about the existing health care system to optimize their own professional activities and participate in solving practical problems of the industry

PLO 21 - adhere to the code of ethics of the doctor, which ensures the formation of a specialist with appropriate person

### **1.3.3 The study of the discipline provides students with the following social skills (soft skills):**

Ability to abstract thinking, analysis and synthesis, the ability to learn and be modernly trained

Ability to apply knowledge in practical situations. Knowledge and understanding of the subject area and understanding of professional activity. Ability to adapt and act in a new situation. Ability to make an informed decision; work in a team;

interpersonal skills. Ability to communicate in the state language both orally and in writing; ability to communicate in a foreign language. Skills in the use of information and communication technologies. Definiteness and persistence in terms of tasks and responsibilities. Ability to act socially responsibly and consciously. The desire to preserve the environment.

## 2. Information volume of the discipline

Name of indices	Branch of knowledge, direction of training, educational-qualification level	Characteristics of the course	
		Day tuition	
Number of credits – 3	Direction of training 22 «Health Protection»	Elective	
Total number of hours - 90	Specialty 222 «Medicine»	<b>Year of study:</b>	
		V-th	
		<b>Term</b>	
		IX -th	X -th
		<b>Lectures</b>	
Number of hours for day tuition: Practical classes – 20, Independent work - 70	Educational-qualification level: «second (master's) level»	0 hours	
		<b>Practical classes</b>	
		20 hours	
		<b>Independent work</b>	
		70 hours	
		Type of control: Credit	

### 2.1 Description of the discipline

**2.2.1 Lectures- not provided by the program.**

**2.2.2 Seminars- not provided by the program.**

**2.2.3 Practical classes.**

№	The topic practical lesson	Hours	Education methods	Methods of control
1	Topic 1. Basic principles of pharmacotherapy in aspect of age.	1	story-explanation, conversation, illustration, demonstration, presentation, videos,	oral examination (individual and frontal); written survey; test



			educational video films discussion	control; creative tasks
	Topic 2. Features of pharmacokinetics of drugs depending on age.	2	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
	Topic 3. Features of pharmacodynamics of drugs associated with age.	2	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
2	Topic 4. Features of dose selection and quantity of drugs in elderly patients. Features of age-related metabolic changes, circulatory and internal organs in the elderly. Features of drug metabolism in elderly patients.	3	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
	Topic 5. Options for drug response in old age. Features of drug use in elderly patients.	2	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
3	Topic 6. Features of pharmacodynamics and pharmacokinetics of drugs in children and adolescents. Features of dosage, choice of dosage form and method of drug administration in	2	story-explanation, conversation, illustration, demonstration, presentation, videos,	oral examination (individual and frontal); written survey; test

	children.		educational video films discussion	control; creative tasks
	Topic 7. Features of clinical pharmacology in infants.	3	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
4	Topic 8. Features of clinical pharmacology during pregnancy.	2	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
	Topic 9. Features of the use of drugs during lactation/	2	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
	Credit	1		Creative tasks
Total for practical classes		20		

#### 2.2.4 Labs- not provided by the program.

#### 2.2.5 Independent work of students:

Independent work	Hours	Education methods	Methods of control
Independent work of students: Preparation for practical classes Writing an abstract	60	Independent work with literature and Internet resources	oral examination (individual and frontal); written survey; test control; creative

			tasks
Individual work: Report of the abstract in a practical lesson. Report at clinical conferences of the bases of the department. Writing abstracts, articles.	10	Independent work with literature and Internet resources	creative tasks; individual tasks; abstracts; report; declamation; poster report
Total hours:	70		

### Topics for individual work:

1. Features of drug metabolism in childhood
2. Features of drug metabolism in the elderly
3. Features of blood circulation in childhood, which affect the action of drugs
4. Features of blood circulation in the elderly, which affect the action of drugs
5. Features of anthropometric changes in childhood that may affect the action of drugs
6. Features of metabolic changes in childhood that affect the action of drugs
7. Features of metabolic changes in the elderly that affect the action of drugs
8. Features of renal changes in the elderly, which affect the action of drugs
9. Features of the state of internal organs in the elderly, which may affect the action of drugs
10. Features of dose selection of drugs in childhood.
11. Features of dose selection of drugs in the elderly.
12. Causes that cause a high risk of side effects and complications in children
13. Causes that cause a high risk of side effects and complications in the elderly
14. Features of prescription of drugs during pregnancy and lactation.

## 3. Assessment Policy

**3.1 Current training activity.** Evaluation of the success of education of students is carried out on the basis of the current "Instructions for evaluating the educational activities of students of KNMU"

Teachers shall ensure that each master receives the necessary competences in the areas covered by the practical classes. Mastering the topic (current control) is controlled by practical lessons according to specific goals, tests, solution of situational tasks, control of the acquisition of practical skills.

When assessing the mastering of each discipline subject (current training activity - CTA) and the final session (software), the master is awarded an assessment according to the traditional 4-point system: "excellent", "good", "satisfactory" and "unsatisfactory".

**Score from discipline.** The final lesson (FL) is conducted according to the program of the discipline during the semester on a schedule, during the classes. Assessment of the discipline is given to the master at the last (final) class. The total score for the CTA and the final lesson (FL) is defined as the arithmetic mean of the

traditional scores for each lesson and the software, rounded to 2 decimal places (to the nearest hundredths), which are converted into points according to the "Instructions for Assessment of Master Learning Activities" Using Table or the average score (up to one hundredth) and its conversion to ECTC points is automatically obtained by the teacher through from the Electronic journal. The minimum number of points that a master must earn for his / her current activity while studying the discipline is 120 points, and the maximum number of points is 200 points.

The maximum number of points that a master can gain in studying the discipline is - 200, the minimum is 120 points. The type of final control is credit.

After completing the teaching of the discipline the master gets a credit.

**Assessment of masters' independent work.** Independent work of masters, which is provided by the topic of the lesson along with the classroom work, is assessed during the ongoing control of the topic at the relevant lesson.

Table 3

**Recalculation of the average for current activity in a multi-scale scale  
(for disciplines ending with credit)**

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	200	4.22-4,23	169	3.45-3,46	138
4.97-4,99	199	4.19-4,21	168	3.42-3,44	137
4.95-4,96	198	4.17-4,18	167	3.4-3,41	136
4.92-4,94	197	4.14-4,16	166	3.37-3,39	135
4.9-4,91	196	4.12-4,13	165	3.35-3,36	134
4.87-4,89	195	4.09-4,11	164	3.32-3,34	133
4.85-4,86	194	4.07-4,08	163	3.3-3,31	132
4.82-4,84	193	4.04-4,06	162	3.27-3,29	131
4.8-4,81	192	4.02-4,03	161	3.25-3,26	130
4.77-4,79	191	3.99-4,01	160	3.22-3,24	129
4.75-4,76	190	3.97-3,98	159	3.2-3,21	128
4.72-4,74	189	3.94-3,96	158	3.17-3,19	127
4.7-4,71	188	3.92-3,93	157	3.15-3,16	126
4.67-4,69	187	3.89-3,91	156	3.12-3,14	125
4.65-4,66	186	3.87-3,88	155	3.1-3,11	124
4.62-4,64	185	3.84-3,86	154	3.07-3,09	123
4.6-4,61	184	3.82-3,83	153	3.05-3,06	122
4.57-4,59	183	3.79-3,81	152	3.02-3,04	121
4.54-4,56	182	3.77-3,78	151	3-3,01	120
4.52-4,53	181	3.74-3,76	150	<b>Less 3</b>	<b>Not enough</b>
4.5-4,51	180	3.72-3,73	149		
4.47-4,49	179	3.7-3,71	148		
4.45-4,46	178	3.67-3,69	147		

4.42-4,44	177	3.65-3,66	146
4.4-4,41	176	3.62-3,64	145
4.37-4,39	175	3.6-3,61	144
4.35-4,36	174	3.57-3,59	143
4.32-4,34	173	3.55-3,56	142
4.3-4,31	172	3.52-3,54	141
4,27-4,29	171	3.5-3,51	140
4.24-4,26	170	3.47-3,49	139

**Correspondence of discipline  
assessment in points assessment  
in ECTS and traditional  
assessment**

Assessment of discipline in points	Assessment on the ECTS scale	Traditional assessment from the discipline
180–200	A	5
160–179	B	4
150–159	C	4
130–149	D	3
120–129	E	3
Less than 120	F, FX	2

### 3.2. Questions for credit

1. Clinical pharmacokinetics depending on age.
2. The concept of bioequivalence. Ways of drug administration.
3. Synergistic and antagonistic drug interactions of drugs.
4. Interaction of food and drugs.
5. Distribution of drugs in the body depending on the age of the patient.
6. Metabolism of drugs depending on age.
7. Withdrawal of drugs from the body depending on age.
8. Clinical pharmacodynamics in the age aspect.
9. Selectivity of drugs.
10. The relationship between pharmacodynamics and pharmacokinetics
11. Types of side effects of drugs in the age aspect.
12. Side effects of drugs.

13. Interaction of drugs.
14. Features of clinical pharmacology in pregnant women.
15. The concept of the mother-placenta-fetus system.
16. Classification of drugs according to the risk of embryotoxic and teratogenic effects.
17. Accumulation of drugs in the tissues of the embryo and fetus.
18. The use of certain groups of drugs in pregnant women.
19. Features of clinical pharmacology in lactating women.
20. Drugs that affect the secretion of milk.
21. Features of clinical pharmacology in drugs in infants.
22. Features of clinical pharmacology from age categories in childhood.
23. Features of clinical pharmacology in old age.
24. Basic principles of pharmacotherapy in terms of age.
25. Drug interaction with combined use in elderly patients

### **3.3. Control questions**

**Consists in methodical recommendations from each lesson.**

### **3.4. Individual tasks**

Preparation for a practical lesson. Writing essays, preparing presentations on a particular topic.

**Assessment of individual tasks** of the masters is carried out under the conditions of the teacher's tasks (report of a lecture at a practical lesson, a report with a presentation at a practical lesson, a report at scientific and practical conferences of the department, university, writing abstracts, articles, participation in the All-Ukrainian Olympiad). Points (no more than 10) are added as an incentive extra point to the final grade for the current learning activity. The total amount of points for the current educational activity may not exceed 200 points.

### **3.5. Rules for appealing the assessment**

According to the provision on the appeal of the results of the final control of students of KhNMU

[http://files.knmu.edu.ua:8181/upload/redakt/doc\\_uchproc/polog\\_apel.pdf](http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/polog_apel.pdf)

## **4. Course politics.**

### **Academic expectations of students and female students. Course requirements.**

Students are expected to attend all practical classes. If they missed classes, it is necessary to complete it (according to the schedule at the information stand of the department).

Written and homework assignments must be completed in full and on time,

if students have questions, they can contact the teacher personally.

In order to achieve the learning goals and successfully complete the course, it is necessary: from the first day to join the work; read the material beforehand before considering it in a practical session; not to be late or miss classes; to come to the department dressed in a medical gown, to have replaceable shoes, to have a notebook, a pen; complete all necessary tasks and work daily; be able to work with a partner or as part of a group; seek help and receive it when you need it.

### **Practical classes**

Active participation in the discussion in the classroom, students / female students should be ready to understand in detail the material, ask questions, express their point of view, discuss. During the discussion, the following are important:

- respect for colleagues,
- tolerance towards others and their experiences,
- sensitivity and impartiality,
- the ability to disagree with opinions, but respect the personality of the opponent,
- careful argumentation of your opinion and the courage to change your position under the influence of evidence,
- “I am” a statement when a person avoids unnecessary dressing up, describes his feelings and formulates his wishes based on his own thoughts and emotions,
- compulsory acquaintance with primary sources.

Creative approach in its various forms is encouraged. Students are expected to be interested in participating local, all-Ukrainian and international conferences, competitions and other events with a subject profile.

Students can discuss various tasks, but their implementation is strictly individual. Cheating, using various software tools, prompts, using a mobile phone, tablet or other electronic gadgets during the class for purposes not related to the educational process are not allowed. Students are not allowed to be late for practical classes.

Visiting patients during supervision in the hospital is possible, provided that students have the appropriate uniform.

Students with special needs can meet with the teacher or warn him before the start of classes, at the request of the student this can be done by the head of the group. If you have any questions, please contact the teacher.

Students are encouraged to participate in scientific research and conferences on this topic.

All students of KNMU are protected by the Regulation on the Prevention, Prevention and Management of Cases of Sexual Harassment and Discrimination at Kharkiv National Medical University, designed to determine an effective mechanism for resolving conflict situations related to discrimination and sexual harassment. This Regulation was developed on the basis of such regulatory legal acts of Ukraine: the Constitution of Ukraine; Law of Ukraine "On Education"; Law of Ukraine "On Higher Education"; Law of Ukraine "On the principles of

preventing and combating discrimination in Ukraine"; Law of Ukraine "On ensuring equal rights and opportunities for women and men"; Convention for the Protection of Human Rights and Fundamental Freedoms; The Convention against Discrimination in Education; The Convention on the Elimination of All Forms of Discrimination against Women; General Recommendation No. 25 to article 4, paragraph 1, of the Convention on the Elimination of All Forms of Discrimination against Women; General Comment No. 16 (2005) "Exactly for men and women the right to enjoy economic, social and cultural rights" (Article 3 of the International Covenant on Economic, Social and Cultural Rights; UN Committee on Economic, Social and Cultural Rights) Recommendations on education in the spirit international understanding, cooperation and peace and education in the spirit of respect for human rights and fundamental freedoms (UNESCO) Concept of the State social program for ensuring equal rights and opportunities for women and men for the period until 2021. Kharkiv National Medical University provides education and employment free from discrimination, sexual harassment, intimidation or exploitation. The university recognizes the importance of confidentiality. All persons responsible for the implementation of this policy (employees / -these dean's offices, faculties, institutes and the Center for Gender Education, members of the student government and ethics committee, vice-rector for scientific and pedagogical work) respect the confidentiality of persons who report or are accused of discrimination or sexual harassment (excluding situations where legislation requires the disclosure of information and / or when disclosure of circumstances by the University is necessary to protect the safety of others).

KNMU creates a space of equal opportunities, free from discrimination of any national, racial or ethnic origin, gender, age, disability, religion, sexual orientation, gender, or marital status. All rights, privileges, programs and activities that are granted to students / female students or university staff apply to all, without exception, subject to proper qualifications. The anti-discrimination policy and the policy of counteracting sexual harassment of KNMU is confirmed by the Code of Corporate Ethics and the Charter of KNMU.

### **Classroom Behavior (Basic "yes" and "no")**

It is important for students to follow the rules of proper conduct at the university. These rules are general for everyone, they also apply to the entire faculty and staff, and do not fundamentally differ from generally accepted norms.

During classes it is not prohibited:

- to leave the audience for a short time if necessary and with the permission of the teacher;
- drink soft drinks;
- take pictures of presentation slides;
- actively participate in the lesson

Prohibited:

- to eat (except for persons whose special medical condition requires another - in this case, medical confirmation is required)
- to smoke, consume alcoholic and even low-alcohol drinks or drugs;
- to use obscene language or use words that offend the honor and dignity of



colleagues and faculty;

- to play gambling;
- to damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter premises and territories)
- to make noise, shout or listen to loud music in classrooms and even corridors during class.

#### Occupational Safety and Health

At the first class of the course, the basic principles of labor protection will be explained by conducting appropriate instructions. It is expected that each and every one should know where the emergency exit closest to the audience is, where the fire extinguisher is located, how to use it, and the like.

**The procedure for informing about changes in the Syllabus:** the necessary changes in the Syllabus are approved by the methodological commission of the KNMU on the problems of professional education of the surgical profile and are published on the website of the KNMU, the website of the Clinical pharmacology department of the KNMU.

### 5. Academic integrity.

The Department of Clinical Pharmacology and Internal Medicine maintains zero tolerance for plagiarism.

This position grounded at the requirements of Regulations on Academic Integrity and Ethics of Academic Relations at Kharkiv National Medical University

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Regulations on the Commission on Academic Integrity, Ethics and Conflict

Management of KhNMU

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ACADEMIC INTEGRITY:

[http://www.knmu.kharkov.ua/index.php?option=com\\_content&view=article&id=2520%3A2015-04-30-08-10-46&catid=20%3A2011-05-17-09-30-17&Itemid=40](http://www.knmu.kharkov.ua/index.php?option=com_content&view=article&id=2520%3A2015-04-30-08-10-46&catid=20%3A2011-05-17-09-30-17&Itemid=40)

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[http://files.knmu.edu.ua:8181/upload/redakt/doc\\_uchproc/kodex\\_AD.docx](http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/kodex_AD.docx)

In the first lessons, informational events will be held on what exactly is considered plagiarism and how to correctly carry out an experimental scientific search.

### 6. Recommended literature

#### Basic

1. Nelson Textbook of Pediatrics 21th Edition. Robert M. Kliegman, Joseph St. Geme. Publisher: Elsevier. 2019. P. 4112.

2. Вікові аспекти фармакотерапії. Навчальний посібник/Біловол О.М., Князькова І.І., Златкіна В.В., Немцова В.Д., Ільченко І.А.//Харків, ХНМУ, 2018. - 89 с
3. Основипедіатрії за Нельсоном у 2-х томах (8-е видання) / КаренДж. Маркданте, Роберт М. Клігман. – 2019. - 378 с.
4. Кардіологія дитячого віку: навчальний посібник / Ю.В. Марушко, Т.В. Марушко та інші/ За ред. Ю.В. Марушка, Т.В. Марушко – Київ – Хмельницький: Приватна друкарня ФО-П Строжук О.В., 2018. – 528 с.
5. Kim, Joong; Segal, Neil (2015). Pharmacological Treatment of Musculoskeletal Conditions During Pregnancy and Lactation. Springer International Publishing. pp. 227–242. ISBN 978-3-319-14318-7.
6. FDA (1 April 2015), CFR – Code of Federal Regulations Title 21, Food and Drug Administration
7. FDA (3 December 2014), Pregnancy and Lactation Labeling (Drugs) Final Rule, Food and Drug Administration

## **7.Information resources.**

1. Link from the Page of educational course in Moodle:  
<http://31.128.79.157:8083/course/view.php?id=3044>
2. [www.moz.gov.ua](http://www.moz.gov.ua)
3. [www.studmedlib.ru](http://www.studmedlib.ru)
4. [www.Med-Tutorial.ru](http://www.Med-Tutorial.ru)
5. [www.Med-books.by](http://www.Med-books.by)
6. <http://www.tga.health.gov.au/adr/aadrb.htm>.
7. <http://www.mhra.gov.uk/Publications/Safetyguidance/DrugSafetyUpdate/index.htm>.
8. <https://www.accessdata.fda.gov/scripts/medwatch/medwatch-online.htm>
9. <http://www.medscape.com> ,
10. <http://www.orpha.net> ,
11. <https://www.aace.com/>, <http://nbuv.gov.ua>– site of the National Library of Ukraine named after VI Vernadsky.
12. <http://korolenko.kharkov.com> – site of Kharkiv State Scientific Library named after VG Korolenko