

MINISTRY OF HEALTH OF UKRAINE  
KHARKIV NATIONAL MEDICAL UNIVERSITY  
Department of General Practice - Family Medicine and Internal Diseases  
Academic year 2021/2022

**SYLLABUS OF THE COURSE**

**Fundamentals of gerontology and geriatrics**

Discipline status – selective

Discipline format – full-time

Area of knowledge 22 "Health Care"

Specialty 222 "Medicine"

Educational program "Medicine" of the second (magister's) level of higher education

The syllabus was approved at the Department  
of General Practice - Family Medicine and  
Internal Medicine meeting

Approved by the methodical commission of  
KhNMU of internal diseases training  
problems

Protocol dated  
August 27, 2021

No. 8

Head of Department

(signature)

prof. L.M.Pasieshvili  
(full name)

August 27, 2021

Protocol dated  
August 31, 2021

No. 1

Head

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prof. P.G. Kravchun  
(full name)

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## INTRODUCTION

Syllabus of the discipline "Fundamentals of gerontology and geriatrics" compiled in accordance with the Educational and Professional Program "Medicine" and the draft Standard of Higher Education of Ukraine (hereinafter - the Standard), the second (magister's) level, branch of knowledge 22 "Health", specialty 222 "Medicine".

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

The current demographic trend is characterized by significant population aging. According to the Institute of Social Research, the elderly in Western Europe now make up about 25%, in Ukraine in cities up to 27%, in rural areas - 40%. This feature identifies the serious and complex challenges that practical medicine facing. It is important to know that in the elderly, in addition to pathology of the cardiovascular system, recently the trend is growing towards the incidence of cancer and mental disorders. In addition, in contrast to middle-aged patients, the gerontological group of patients dramatically changes the nature and features of the disease: more often there are numerous comorbidities, significantly impaired nervous function, changing protective adaptive processes. Older people respond differently to medications and treatments than young people. Due to long-term use of various medications, elderly patients are more likely to experience various side effects. All this requires special forms of organization and conduct of such patients for general and special care. The program is built on the principle of creating separate thematic blocks. The latest achievements of molecular biology, physiology, clinical pharmacology are included. The study of the elective course "Fundamentals of Gerontology and Geriatrics" is conducted in the form of classroom training - lectures and practical classes, as well as independent work of students and consultations. Practical classes lasting 2 hours are built in the form of discussions and debates on the topic, in preparation for which much attention is paid to independent work of students with literature and other sources of information. The organization of the educational process is carried out according to the credit-transfer system. 90 study hours, 20 of which is allocated for the study of the elective course "Fundamentals of Gerontology and Geriatrics" by attending practical classes and 70 - independent work of students. Mastering the topic is controlled during practical classes (current control). The following means of checking the level of preparation of students are used: test control to assess the acquisition of theoretical knowledge and solving situational problems to test the ability to apply them in specific situations of professional activity. The form of final control in the discipline "Fundamentals of Gerontology and Geriatrics" is a credit, the results of which are evaluated on a two-point system "credited" or "not credited", which does not provide a separate training session for its acceptance. A student who has completed all types of work provided for in the discipline program, attended all classes provided for in the calendar plan (or completed them in a timely manner) and scored the total number of points not less than then minimum, receives a grade of "passed". Assessment of student performance in the discipline is a rating and is set on a multi-point scale based on current performance, and should be determined by the ECTS system and the traditional scale adopted in Ukraine.

**The subject** study of the discipline "Fundamentals of Gerontology and Geneatry" is the age-related changes in various systems related to the features of the course of care for people in care and the elderly, necessary for doctors of all specialties.

**Interdisciplinary connections.**

"Fundamentals of Gerontology and Geriatrics" is part of a group of disciplines that study clinical disciplines (internal medicine, surgery, etc.), including from an organizational point of view.

**Prerequisites of the discipline.**

"Fundamentals of Gerontology and Geriatrics" as a discipline is based on knowledge of normal and pathological physiology, normal and pathological anatomy, biochemistry and therapy.

**Post-requisites of the discipline.**

"Fundamentals of Gerontology and Geriatrics" as a discipline for fifth-year students is the basis for the study of gerontology and geriatrics in the internship.

**Moodle discipline page**

[http://31.128.79.157:8083/course/index.php?categoryid=18.](http://31.128.79.157:8083/course/index.php?categoryid=18)

**1. PURPOSE AND OBJECTIVES OF THE COURSE**

**1.1. The purpose of studying the discipline** "Fundamentals of Gerontology and Geriatrics" is the acquisition by students of knowledge about age-related changes in various body systems and features of the disease in the elderly and senile.

**1.2. The main objectives of the discipline are:**

- Orient in the basic mechanisms of aging, anti-aging.
- Orient in the basic principles of prevention of premature aging.
- Orient in the basic principles of treatment of elderly patients.

**1.3. Competences and learning results**, the formation of which is facilitated by the discipline (the relationship with the normative content of training of higher education, formulated in terms of learning outcomes in the Educational and professional program and Standard).

**1.3.1. The study of the discipline ensures the acquisition of **competencies** by students:**

**integral:** Ability to solve typical and complex specialized problems and to solve practical problems in professional activity in the field of health care, or in the process of training, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.

**general:**

- Ability to abstract thinking, analysis and synthesis, the ability to learn and be modernly educated
- 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 relation to the set tasks and responsibilities
- The ability to act socially responsibly and consciously
- specialized (professional, subject)**
- Survey skills
- Ability to determine the required list of laboratory and instrumental studies and evaluate their results
- Ability to establish a preliminary and clinical diagnosis of the disease
- Ability to determine the required mode of work and rest, the nature of nutrition in the treatment of diseases
- Ability to determine the principles and nature of disease treatment
- Ability to diagnose emergencies
- Ability to determine tactics and skills of emergency care
- Ability to carry out medical and evacuation measures
- Skills to perform medical manipulations
- Ability to determine the management tactics of persons subject to dispensary supervision
- Ability to maintain medical documentation

**1.3.2.** The study of the discipline provides students with the acquisition of the following **program learning outcomes**:

Knowledge and understanding:

- acquisition by a person of general and special fundamental and professionally-oriented knowledge, skills, abilities, competencies necessary for the performance of typical professional tasks related to his / her activity in the medical field in the relevant position
- knowledge of human psychophysiological features, human health, health support, disease prevention, human treatment, public health

Application of knowledge and understanding:

- ability 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
- gathering information about the patient
- evaluation of survey results, physical examination, laboratory and instrumental research data
- establishing a preliminary clinical diagnosis of the disease
- determining the nature, principles of treatment of diseases
- determination of the necessary diet, mode of work and rest in the treatment of diseases

- determination of tactics of contingent management of persons subject to dispensary supervision
- diagnosing emergencies, determining the tactics of emergency medical care
- performing medical manipulations
- maintenance of medical documentation, processing of state, social and medical information

Formation of judgments:

- ability to assess human health and provide support taking into account the impact of the environment and other health factors
- ability to apply the acquired knowledge of the existing health care system to optimize their own professional activities and participate in solving practical problems of the industry
- formation of a specialist with appropriate personal qualities, who adheres to the code of ethics of the doctor

**1.3.3.** The study of the discipline ensures that students acquire the following **soft skills**:

**ASSESSMENT AND DIAGNOSIS:** An assessment and diagnosis requires developed clinical reasoning skills. Clinical reasoning consists of data gathering and interpretation, hypothesis generation and testing, and critical evaluation of diagnostic strategies. It is a dynamic process that occurs before, during, and after the collection of data through history, physical examination, imaging, laboratory tests and case related clinical services.

**MANAGEMENT PLAN:** Management involves the development, implementation and documentation of a patient care plan for positively impacting a patient's health and well-being, including specific therapeutic goals and prognoses. It may include case follow-up, referral, and/or collaborative care.

**HEALTH PROMOTION AND DISEASE PREVENTION:** Health promotion and disease prevention requires an understanding and application of epidemiological principles regarding the nature and identification of health issues in diverse populations and recognizes the impact of biological, chemical, behavioral, structural, psychosocial and environmental factors on general health.

**COMMUNICATION AND RECORD KEEPING:** Effective communication includes oral, written and nonverbal skills with appropriate sensitivity, clarity and control for a wide range of healthcare related activities, to include patient care, professional communication, health education, and record keeping and reporting.

**PROFESSIONAL ETHICS AND JURISPRUDENCE:** Professionals comply with the law and exhibit ethical behavior.

**INFORMATION AND TECHNOLOGY LITERACY:** Information literacy is a set of abilities, including the use of technology, to locate, evaluate and integrate research and other types of evidence to manage patient care.

**INTERPROFESSIONAL EDUCATION:** Students have the knowledge, skills and values necessary to function as part of an inter-professional team to provide patientcentered collaborative care. Inter-professional teamwork may be demonstrated in didactic, clinical or simulated learning environments.



## 2. INFORMATION SCOPE OF THE DISCIPLINE

### 2.1 Description of the discipline

Name of indicators	Branch of knowledge, specialty, educational level, educational and professional program	Characteristics of the discipline	
		full-time education	external form of education
Number of credits – 3	Branch of knowledge 22 "Health care"	Selective	
Total number of hours – 90	Specialty: 222 "Medicine",	<b>Year of study (course):</b>	
		5th	5th
		<b>Term</b>	
		11-12	11-12
		<b>Lectures</b>	
		hours	hours
		<b>Practical, seminar</b>	
		20 hours	hours
Hours for full-time study: classrooms - 20 independent student work - 70	Educational level: second (magister's) level  educational and professional program "Medicine"	<b>Laboratory</b>	
		hours	hours
		<b>Independent work</b>	
		70 hours	hours
		<b>Individual tasks: hours</b>	
		Type of final control: <b>credit</b>	

### 2.2.3 Practical classes

№	Name the topics	Number of hours	Teaching methods	Forms of control
1	Socio-hygienic and demographic issues of population aging and its consequences.	5	story-explanation, conversation, presentation, discussion, modeling of processes and situations.	oral examination (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; report; speech on a given topic.
2	Features of geriatric pharmacology, pharmacotherapy, rehabilitation and nutrition.	5		
3	Age-related changes and features of diseases of	5		

	internal organs in geriatrics.			
4	Age-related changes and features of diseases of the musculoskeletal system, nervous system and mental disorders in geriatrics.	5		
	Hours in total	20		

### 2.2.5 Independent work

№	Name the topics	Number of hours	Teaching methods	Forms of control
1	Age-related changes and features of internal diseases in geriatrics.	30	Independent work	abstracts; report; speech on a given topic.
2	Age-related changes and features of diseases of the musculoskeletal system, nervous system and mental disorders in geriatrics.	40	Independent work	abstracts; report; speech on a given topic.
	Hours in total	70		

## 3. EVALUATION CRITERIA

Marks system based at the "Інструкція з оцінювання навчальної діяльності здобувачів вищої освіти в Харківському національному медичному університеті".

During each practical classes students have traditional 4-point system marks: "excellent", "good", "satisfactory" or "unsatisfactory".

The final score for the current learning activity is defined as the arithmetic mean of traditional grades for each lesson and converted to a multi-point scale according to Table 1.

Table 1

**Recalculation of the average grade for current activities in a multi-point scale for disciplines that end with a 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		
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		
				Less than 3	Not enough

### Rules for appealing the assessment

The student can appeal the current assessment to the departmental appeal commission consisting of the head of the department, teacher and professor or associate professor of the department.

According to the current «Положення про апеляцію результатів підсумкового контролю здобувачі освіти ХНМУ» a student can appeal the assessment of differentiated credit by submitting an application to his dean's office no later than the

next day after the announcement of the assessment and subsequent reassignment of differentiated credit to the appeal commission.

#### **4. DISCIPLINE POLICY AND VALUES**

Discipline requirements – following the laws of Ukraine, Kharkiv National Medical University rules, general ethics.

Class attendance and behavior - prohibition of absence, delays.

Academic Integrity Policy – following the academic integrity.

Policy for people with special educational needs – individual approach to students according curriculum.

Recommendations for successful discipline passing – following the curriculum, obtaining enough of points.

Penalties – non-compliance with these requirements leads to penalties.

Accident prevention – following the safety regulations.

Procedure for informing about syllabus changes - this information is available at the official website of Kharkiv National Medical University.

#### **5. ACADEMIC INTEGRITY**

According to «Кодекс академічної доброчесності Харківського національного медичного університету» KhNMU has introduced a system of academic integrity in order to support the idea of integrity and decent relationships between participants in the academic process; promoting the importance of academic integrity; addressing issues related to raising the quality of higher education; promoting the development of a positive reputation; raising the rating of teachers and the competitiveness of university graduates; development of skills of conscientious and correct work with sources of information; compliance with the requirements of scientific ethics and respect for the intellectual property of others; activation of independence and individuality in the creation of their own works, as well as increasing the responsibility for violating the generally accepted rules of citation.

#### **6. RECOMMENDED LITERATURE**

##### **Basic**

Oxford Textbook of Geriatric Medicine. Edited by Jean-Pierre Michel, B. Lynn Beattie, Finbarr C. Martin, and Jeremy Walston. 3rd Edition. Oxford University Press 2017.

Brocklehurst's Textbook of Geriatric Medicine and Gerontology, 8th Edition. Authors : Howard M. Fillit & Kenneth Rockwood & John B Young, 2016.

##### **Additional**

Family Medicine: in 3 books: textbook. Book 1. General Issues of Family Medicine / O.M. Hyrina, L.M.Pasiyeshvili, O.M.Barna, A.S.Svintsitskiy et al.; edited by O.M. Hyrina, L.M.Pasiyeshvili. - Kyiv: AUS Medicine Publishing, 2016. – 560 p.

## 7. INFORMATION RESOURCES

Library of Kharkiv National Medical University.

Official site of the Ministry of Health of Ukraine: <http://www.moz.gov.ua/>

**Moodle discipline page**

<http://31.128.79.157:8083/course/index.php?categoryid=18>.