



**INTERNATIONAL EUROPEAN UNIVERSITY**  
**EDUCATIONAL AND RESEARCH INSTITUTE**  
**"EUROPEAN MEDICAL SCHOOL"**

**Department of Fundamental, Medical and Preventive  
Disciplines**

**APPROVED** by  
The Scientific and Methodical Council of the  
University, protocol dd. August 29, 2023 No. 7  
Deputy Chair of SMC *O. Lisnichuk* O. LISNICHUK

**WORKING PROGRAM OF THE ACADEMIC DISCIPLINE:**  
**HYGIENE AND OCCUPATIONAL DISEASES, HEALTH**  
**CARE ORGANIZATION**

to train students of the second (Master's) level  
(full-time mode of study)

**Knowledge area 22 "Health care"**

**Specialty 222 "Medicine"**

**Educational program: Medicine**

**Discipline status: Compulsory**

The working program of the **Hygiene and occupational diseases, health care organization** academic disciplines is based on the Medicine educational and professional program for the second (Master) level of the 222 Medicine specialty approved by the University Academic Council on May 30, 2023, protocol №4.

PROGRAM DEVELOPER:

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The working program of the academic disciplines is reviewed and approved by the Department of Fundamental, Medical and Preventive Disciplines, protocol No. 1 dd. August 25, 2023.

Head of the Department of Fundamental, Medical and Preventive Disciplines, PhD in Biology, Associate Professor \_\_\_\_\_ Victoria KOVALENKO

The program is reviewed and approved by the Academic Council of the European Medical School, protocol No. 1 dd. August 29, 2023.

Chair of the Academic Council  
of the European Medical School

Ph.D in Medicine,  
associate professor \_\_\_\_\_

Yevhenii SIMONETS

## INTRODUCTION

**The study program of the academic discipline** "Hygiene and occupational diseases, health care organization" was developed in accordance with Standard of higher education of Ukraine for the training of specialists of the second (master's) level, field of knowledge 22 - "Health care", specialty - 222 "Medicine", educational qualification "Master of Medicine", professional qualification "Doctor".

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

The study program of the discipline "Hygiene and occupational diseases, organization of health care" is intended for higher medical institutions of education of Ukraine in accordance with the requirements of the ECTS credit-transfer system of the organization of the educational process, based on a combination of learning technologies by sections and credit assessment credits - units of measurement of educational the student's load necessary for mastering the discipline or its section.

In accordance with the curriculum for training specialists of the second (master's) level of higher education in the field of knowledge 22 "Health care", the academic discipline "Hygiene and occupational diseases, organization of health care" is taught in the 6th year of study.

For the study of the discipline "Hygiene and occupational diseases, organization of health care" 5 credits (150 hours) are provided, of which 70 classroom hours, 80 - independent work.

### **Information volume of the academic discipline**

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the academic discipline
		full-time education
<b>The number of credits is 5</b>	<b>Branch of knowledge 22 "HEALTH PROTECTION"</b>	Normative (optional)
	Field of study "Medicine"	
There are 2 sections	Specialty: 222 "Medicine"	A year of training
Substantial births - 5		6
<b>The total number of hours is 150</b>		Semester XII
		Lectures
Weekly load: Auditory - 4	<b>Education level: "Master of Medicine" qualifications of a professional "doctor"</b>	10
		Practical
		60
		Independent work
		80
		type of control
		Exam

**Subject of study Chapter 1** "Hygiene and occupational diseases" of the academic discipline deals with the impact of the environment and the production

environment on the human body, including medical workers, with the aim of substantiating hygienic standards, sanitary norms and rules, and preventive measures, the implementation of which ensures optimal conditions for life and work, preservation and strengthening of health and prevention of diseases. **Chapter 2** "Organization of health care" is devoted to the study of issues of organization and economics of the health care system.

### **Interdisciplinary connections.**

In order to successfully master the discipline, a student of higher education needs the knowledge obtained in the course of studying the following disciplines: "Microbiology", "Physiology", "Pathomorphology", "Pathophysiology", "Hygiene and ecology", "Principles of evidence-based medicine and methodology of scientific research", "Social medicine, public health". The main discipline provides the study of the legal and organizational foundations of the health care industry, contributes to the formation of the preventive direction of the activities of future doctors, taking into account the possible impact on the health of the population of factors of various origins, contributes to the formation of an economic worldview and basic competence characteristics regarding the methodology of economic analysis of the activities of medical institutions in modern conditions.

### **1. The purpose and tasks of the educational discipline**

**1.1. The purpose of the educational discipline "Hygiene and occupational diseases, organization of health care":** is established on the basis of the OPP for the training of a doctor in the specialty "medical affairs" in accordance with the block of its content module and is the basis for building the content of the normative discipline. The description of goals is designed through skills in the form of target tasks (actions). On the basis of the final goals for each content module, specific goals are formulated in the form of certain skills (actions), target tasks that ensure the achievement of the final goal of studying the discipline

**1.2. The main tasks study of Chapter 1 "Hygiene and occupational diseases" is:**

- study of natural and anthropogenic environmental factors and social conditions that can affect human health;
- study of patterns of influence of environmental factors and conditions on the human body or population;
- scientific substantiation and development of hygienic standards, rules and measures for maximum use of environmental factors that have a positive effect on the human body, elimination or limitation to safe levels of adversely acting factors;
- use of developed hygienic recommendations, rules, standards in the practice of health care and national economy, checking their effectiveness and improvement;
- forecasting the sanitary situation for the near and distant future, taking into account the plans for the development of the national economy, determining the relevant hygienic problems, scientific development of these problems.

**1.3. The main tasks study of Chapter 2 "Organization of health care" is:**

- mastering the theoretical foundations and legal foundations of the health care

- system, its functions and strategic directions of development;
- mastering the basics of the organization of medical care, the principles of evaluating the organization and the quality of providing various types of medical care to the population in the conditions of reforming the health care sector;
  - formation of knowledge on the issue of disability examination, its types, order of organization and actions of medical workers regarding specific situations of disability examination;
  - mastering the principles of development of management solutions aimed at improving the activities of health care institutions;
  - mastering the basics of economic analysis of the activity of a medical institution;
  - mastering the principles of analysis and evaluation of financial and economic indicators of the economic activity of medical institutions for the purpose of rational use of available resources;
  - formation of knowledge on issues of price policy, strategic and tactical planning of the economic development of a medical institution.

### **1.3 Competencies and learning outcomes**

The list of graduate competencies, the formation of which contributes to the study of the discipline "Hygiene and occupational diseases, organization of health care" and its relationship with the normative content of the training of students of higher education in the field of knowledge 22 "Health care", formulated in terms of learning outcomes in Standards of higher education of Ukraine, second (master's) level of higher education.

According to the requirements of the Standard of Higher Education of Ukraine, the second (master's) level of higher education in the discipline "Hygiene and occupational diseases, organization of health care" ensures that students acquire competencies of such levels

<b>general competence (ZK)</b>	
<b>ZK 1</b>	Ability to abstract thinking, analysis and synthesis
<b>ZK 2</b>	Ability to learn and master modern knowledge
<b>ZK 3</b>	Ability to apply knowledge in practical situations
<b>ZK 4</b>	Knowledge and understanding of the subject area and understanding of professional activity
<b>ZK 5</b>	Ability to adapt and act in a new situation
<b>ZK 6</b>	Ability to make informed decisions
<b>ZK 7</b>	Ability to work in a team
<b>ZK 8</b>	Ability to interpersonal interaction
<b>ZK 10</b>	Ability to use information and communication technologies
<b>ZK 11</b>	Ability to search, process and analyze information from various sources
<b>ZK 12</b>	Determination and persistence in relation to assigned tasks and assumed responsibilities
<b>Professionals competence (FC)</b>	

<b>FC 4</b>	The ability to determine the necessary regime of work and rest in the treatment and prevention of diseases.
<b>FC 5</b>	The ability to determine the nature of nutrition in the treatment and prevention of diseases
<b>FC 9</b>	Ability to carry out medical evacuation measures.
<b>FC 11</b>	Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility.
<b>FC 13</b>	Ability to carry out sanitary and hygienic and preventive measures
<b>FC 14</b>	Ability to plan and carry out preventive and anti-epidemic measures for infectious diseases
<b>FC 15</b>	The ability to conduct an examination of working capacity.
<b>FC 16</b>	Ability to maintain medical documentation, including electronic forms. Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility
<b>FC 17</b>	The ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population.
<b>FC 18</b>	The ability to analyze the activity of a doctor, unit, health care institution, ensure the quality of medical care and increase the efficiency of the use of medical resources.
<b>FC 19</b>	The ability to organize and integrate the provision of medical assistance to the population and the marketing of medical services.
<b>FC 20</b>	Ability to conduct epidemiological and medical-statistical studies of the health of the population; processing of social, economic and medical information.
<b>FC 21</b>	It is clear and unambiguous to convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying.
<b>FC 22</b>	Ability to manage healthcare workflows that are complex, unpredictable and require new strategic approaches.
<b>FC 23</b>	The ability to develop and implement scientific and applied projects in the field of health care
<b>FC 24</b>	Adherence to ethical principles when working with patients and laboratory animals
<b>FC 25</b>	Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results
<b>Software the results teaching (PRN)</b>	
<b>PRN 1</b>	Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability

	for further professional training with a high level of autonomy.
<b>PRN 2</b>	Understanding and knowledge of fundamental and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.
<b>PRN 3</b>	Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems.
<b>PRN 16</b>	Form rational medical routes for patients; organize interaction with colleagues in their own and other institutions, organizations and institutions; to apply tools for the promotion of medical services in the market, based on the analysis of the needs of the population, in the conditions of the functioning of the health care institution, its division, in a competitive environment.
<b>PRN 18</b>	To determine the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data about the disease and its course, peculiarities of the person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population on the basis of regulatory documents.
<b>PRN 19</b>	Plan and implement a system of anti-epidemic and preventive measures regarding the occurrence and spread of diseases among the population.
<b>PRN 20</b>	Analyze the epidemiological situation and carry out measures for mass and individual, general and local prevention of infectious diseases
<b>PRN 21</b>	Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information
<b>PRN 22</b>	Apply modern digital technologies, specialized software, and statistical methods of data analysis to solve complex healthcare problems.
<b>PRN 23</b>	Assess the impact of the environment on human health in order to assess the morbidity of the population.
<b>PRN 24</b>	To organize the required level of individual safety (own and the persons he cares for) in case of typical dangerous situations in the individual field of activity.
<b>PRN 25</b>	It is clear and unambiguous to convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists.
<b>PRN 26</b>	Manage work processes in the field of health care, which are complex, unpredictable and require new strategic approaches, organize the work and professional development of personnel taking into account the acquired skills of effective teamwork, leadership positions, appropriate quality, accessibility and justice, ensuring the provision of integrated medical help

<b>PRN 27</b>	Communicate freely in the national and English languages, both orally and in writing to discuss professional activities, research and projects.
<b>PRN 28</b>	Make effective decisions on health care issues, assess the necessary resources, take into account social, economic and ethical consequences.

**Students should know:**

**After completing the study of Chapter 1 "Hygiene and occupational diseases ":**

- influence of environmental factors on the state of health of the population;
- methods of hygienic assessment of the influence of environmental factors on the health of the population;
- the laws of hygienic science and the general regularities of the relationship between health and the factors and conditions of the human life environment;
- basics of prevention of diseases of infectious and non-infectious origin;
- methods of preventive and ongoing sanitary supervision;
- principles of organization and implementation of preventive measures in connection with the development of territorial, administrative and production units;
- the principles of organizing and carrying out preventive measures in accordance with the principles of the current legislation of Ukraine.

**After completing the study of Section 2 " Organization of health care":**

- basic principles and types of medical assistance to the population, peculiarities of medical provision of various contingents of the urban and rural population (women, children, elderly people, etc.);
- the organization and content of the work of health care institutions and doctors of the main specialties (family doctors, therapists and pediatricians, obstetricians-gynecologists, doctors of emergency medicine, etc.);
- system of official document circulation in the professional work of a doctor, including modern computer information technologies.

**Students should be able to:**

**After completing the study of Chapter 1 "Hygiene and occupational diseases ":**

- conduct an analysis of the state of the environment and the impact of its factors on the health of various population groups;
- with the help of methods of hygienic assessment to determine the impact of environmental factors on health;
- to interpret the basic laws of hygienic science and to establish general patterns of connection between health and the factors and conditions of the human life environment;
- substantiate hygienic measures for the prevention of diseases of infectious origin;
- plan measures to maintain a healthy lifestyle, personal hygiene and implement



- them in health care practice;
- to plan organizational and substantive measures regarding preventive and ongoing sanitary supervision;
- coordinate plans for carrying out preventive measures with plans for the development of territorial, administrative and production units;
- analyze the state of the environment on the basis of integral criteria for assessing the health of the population;
- justify the implementation of preventive measures in accordance with the principles of the current legislation of Ukraine;
- to plan measures for the organization of medical support in emergency conditions.

**After completing the study of Section 2 " Organization of health care" :**

- identify health priorities, conduct needs assessments, develop and implement evidence-based strategies, and propose evidence-based interventions;
- to analyze the structure, staff and activity of various types of health care institutions that provide medical assistance to the population ;
- evaluate the effectiveness of the organization of providing primary, secondary and tertiary care to different contingents of the population;
- to develop measures to improve the organization and activity of health care institutions at different levels of providing medical care;
- determine the source and location of the necessary information, process the information and conduct its analysis.

**2. Content of the academic discipline:**

**Chapter 1 "Hygiene and occupational diseases "**

*Content section 1. Hygienic importance of the environment and methods of its research. Hygiene of inhabited places and housing. Hygiene of water, soil, air environment*

**Topic 1.** Methodological and methodological bases of studying the impact of a complex of environmental factors on health.

**Topic 2 .** Methods of hygienic studies of the state of the environment and its impact on the body and human health. Hygienic assessment of the impact of natural and anthropogenic components of the biosphere on human and population health

**Topic 3 .** The hygienic value of solar radiation. The hygienic value of solar radiation and the use of its components for the prevention of human diseases and sanitation of air, water and objects. . The use of natural and artificial ultraviolet radiation for the prevention of human diseases , prevention of the harmful effects of physical, chemical and biological factors.

**Topic 4.** Water hygiene and water supply of settlements. Sanitary protection of water bodies. Sanitary soil protection and cleaning of populated areas. Sanitary protection of atmospheric air .

**Topic 5.** Hygiene planning of settlements. Hygiene of residential and public buildings and structures. Hygienic significance of physical factors in the conditions of populated areas.

## ***Content section 2. Special issues of hygiene***

**Topic 6.** Peculiarities of hygienic requirements for the planning and operation of medical and preventive facilities.

Hygienic maintenance of the sanitary and anti-epidemic regime of the premises of medical and preventive facilities and their control, as the basis of infection prevention and infection control in health care facilities that provide medical assistance in inpatient conditions .

**Topic 7.** Modern problems of infectious diseases related to the provision of medical care and a set of hygienic measures for their prevention.

**Topic 8.** Nutrition in preventive medicine. Food organization in medical and preventive institutions and industrial enterprises. Sanitary and hygienic control of public catering.

**Topic 9.** Hygienic evaluation of the factors of the labor process and production environment. Harmful and dangerous factors that affect the work capacity and health of medical workers.

**Topic 10 .** Hygienic assessment of the potential risk of the influence of environmental factors on the human body and public health.

**Topic 11 .** Physical development as an important criterion for assessing the state of health of children and adolescents. Hygienic requirements for the planning, improvement and equipment of children's institutions.

**Topic 12.** Patterns of formation of human radiation load in places of residence, its hygienic assessment and ways of reduction. Radiation danger and anti-radiation protection at objects with radiation-nuclear technologies.

**Topic 13 .** Hygienic assessment of anti-radiation protection of personnel and radiation safety of patients when using radionuclides and other sources of ionizing radiation in medical facilities.

**Topic 14 .** Organization of sanitary supervision of accommodation, food and water supply of military formations, injured population and emergency rescue formations.

## **Chapter 2 " Organization of health care"**

***Content module 3. Healthcare systems. Types of medical care, their characteristics .***

**Topic 15.** Healthcare systems. Reforming the health care system in Ukraine.

**Topic 16 .** Legal principles of health care. Medical Insurance.

**Topic 17.** Types of medical care. Organization of providing primary medical care to the population.

**Topic 18 .** Organization of out-of-hospital (specialized and highly specialized) medical care for the population.

**Topic 19.** Organization of inpatient medical care for the population.

**Topic 20.** Analysis of the activity of the emergency (ambulance) medical service.

**Topic 21.** Medical and social security of the elderly population. Palliative and hospice care.

**Topic 22.** Electronic health. National Health Service

***Content module 4. Medical assistance to certain contingents of the population. Medical examination.***

**Topic 23.** Organization and content of the work of institutions providing obstetrics and gynecology help

**Topic 24 .** Organization of medical care for children, accounting and analysis of the activities of institutions.

**Topic 25.** Peculiarities of the organization of medical care for patients with infectious diseases

**Topic 26 .** Military medicine: peculiarities of the organization of medical assistance to military personnel.

**Topic 27 .** Protection of mental health.

**Topic 28 .** Organization of disability examination, procedure for its implementation.

**Topic 29 .** Medical rehabilitation: features of use for different contingents of patients.

**Content module 5. Management in health care. Assessment of the quality of medical care. Public health system.**

**Topic 30.** Methodology of conducting expert assessments of the quality of medical care for the population.

**Topic 31 .** Analysis of factors influencing the activity of health care institutions.

**Topic 32 .** Public health system: organizational structure, main functions, ways of their implementation.

**Topic 33.** Health care management. Management decision-making methodology.

**Topic 34 .** Management and leadership in health care

### 3. The structure of the academic discipline

No	Names of topics	Number of hours			
		That's all	Including		
			Lectures	Practical training	Independent work
<b>Chapter 1. "Hygiene and occupational diseases "</b>					
<b><i>Content section 1. Hygienic importance of the environment and methods of its research. Hygiene of inhabited places and housing. Hygiene of water, soil, air environment</i></b>					
1.	Methodological and methodological bases of studying the impact of a complex of environmental factors on the health of the population.	5	2	2	1
2.	Methods of hygienic studies of the state of the environment and its impact on the body and human health. Hygienic assessment of the impact of natural and anthropogenic components of the biosphere on human and population health.	4		2	2
3.	The hygienic value of solar radiation and the use of its components for the prevention of human diseases and sanitation of air, water and objects.	4		2	2

4	Water hygiene and water supply of settlements. Sanitary protection of water bodies. Sanitary soil protection and cleaning of populated areas. Sanitary protection of atmospheric air.	5		2	3
5	Hygiene planning of settlements. Hygiene of residential and public buildings and structures. Hygienic significance of physical factors in the conditions of populated areas.	4		2	2
<b><i>Content section 2. Special issues of hygiene</i></b>					
6	Peculiarities of hygienic requirements for the planning and operation of medical and preventive facilities. Hygienic maintenance of the sanitary and anti-epidemic regime of the premises of medical and preventive facilities and their control, as the basis of infection prevention and infection control in health care facilities that provide medical assistance in inpatient conditions.	5		2	3
7	Modern problems of infectious diseases related to the provision of medical care and a set of hygienic measures for their prevention.	4		2	2
8	Nutrition in preventive medicine. Food organization in medical and preventive institutions and industrial enterprises. Public sanitary and hygienic control food _	4		2	2
9	Hygienic evaluation of the factors of the labor process and production environment. Harmful and dangerous factors that affect the work capacity and health of medical workers.	5		2	3
10	Hygienic assessment of the potential risk of the influence of environmental factors on the human body and public health.	4		2	2
11	Physical development as an important criterion for assessing the state of health of children and adolescents. Hygienic requirements for the planning, improvement and equipment of children's institutions.	4		2	2
12	Patterns of the formation of human radiation exposure in places of residence, its hygienic assessment and ways of reducing it. Radiation danger and anti-radiation protection at objects with radiation-nuclear technologies.	5		2	3
13	Hygienic assessment of anti-radiation protection of personnel and radiation safety of patients when using radionuclides and other sources of ionizing radiation in medical facilities.	4		2	2
14	Organization of sanitary supervision of accommodation, food and water supply of military formations, injured population and emergency rescue formations.	4		2	2
<b>Section 2 . Health care organization</b>					
<b><i>Content module 3. Healthcare systems. Types of medical care, their characteristics .</i></b>					
15	Healthcare systems. Reforming the health care system in Ukraine.	4	2		2
16	Legal principles of health care. Medical Insurance.	4	2		2
17	Types of medical care. Organization of providing primary medical care to the population. .	5		2	3
18	Organization of out-of-hospital (specialized and highly specialized) medical care for the population.	5		2	3
19	Organization of inpatient medical care for the population.	5		2	3
20	Analysis of the activity of the emergency (ambulance) medical service.	4		2	2

21	Medical and social security of the elderly population. Palliative and hospice care.	4		2	2
22	Electronic health. National Health Service	5	2		3
<b><i>Content module 4. Medical assistance to certain contingents of the population. Medical examination.</i></b>					
23	Organization and content of work of institutions providing obstetrics and gynecology help	4		2	2
24	Organization of medical care for children, accounting and analysis of the activities of institutions	4		2	2
25	Peculiarities of the organization of medical care for patients with infectious diseases	4		2	2
26	Military medicine: peculiarities of the organization of medical assistance to military personnel.	4		2	2
27	Protection of mental health.	4		2	2
28	Organization of disability examination, procedure for its implementation.	5		2	3
29	Medical rehabilitation: features of use for different contingents of patients.	5		2	3
<b><i>Content module 5. Management in health care. Assessment of the quality of medical care. Public health system.</i></b>					
30	The methodology of conducting expert assessments of the quality of medical care for the population.	5		2	3
31	Analysis of factors influencing the activity of health care institutions.	5		2	3
32	Public health system: organizational structure, main functions, ways of their implementation.	5	2		3
33	Health care management. Management decision-making methodology.	4		2	2
34	Management and leadership in health care	4		2	2
<b>Total hours per discipline</b>		<b>150</b>	<b>10</b>	<b>60</b>	<b>80</b>

#### 4. Lecture topics

No s/p	Topic name	Number of hours
1	Methodological and methodological bases of studying the impact of a complex of environmental factors on the health of the population.	2
2	Healthcare systems. Reforming the health care system in Ukraine.	2
3	Legal principles of health care. Medical Insurance.	2
4	Electronic health. National Health Service	2
5	public system health : organizational structure, main functions , their ways implementation .	2
<b>EVERYTHING</b>		<b>10</b>

#### 5. Topics of seminar classes are not provided for in the program

#### 6. Topics of practical classes

No s/p	Topic name	Number of hours
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<b>Chapter 1. "Hygiene and occupational diseases "</b>		
1.	Methodological and methodological bases of studying the impact of a complex of environmental factors on the health of the population.	2
2.	Methods of hygienic studies of the state of the environment and its impact on the body and human health. Hygienic assessment of the impact of natural and anthropogenic components of the biosphere on human and population health.	2
3	The hygienic value of solar radiation and the use of its components for the prevention of human diseases and sanitation of air, water and objects.	2
4.	Water hygiene and water supply of settlements. Sanitary protection of water bodies, soil and cleaning of populated areas. Sanitary protection of atmospheric air.	2
5.	Hygiene planning of settlements. Hygiene of residential and public buildings and structures. Hygienic significance of physical factors in the conditions of populated areas.	2
6.	Peculiarities of hygienic requirements for the planning and operation of medical and preventive facilities. Hygienic provision of the sanitary and anti-epidemic regime of the premises of medical and preventive facilities and their control.	2
7 .	Modern problems of infectious diseases related to the provision of medical care and a set of hygienic measures for their prevention.	2
8	Food organization in medical and preventive institutions and industrial enterprises. Sanitary and hygienic control of public catering.	2
9.	Hygienic evaluation of the factors of the labor process and production environment. Harmful and dangerous factors that affect the work capacity and health of medical workers.	2
10.	Hygienic assessment of the potential risk of the influence of environmental factors on the human body and public health.	2
11.	Physical development as an important criterion for assessing the state of health of children and adolescents. Hygienic requirements for the planning, improvement and equipment of children's institutions.	2
12.	Patterns of the formation of human radiation exposure in places of residence, its hygienic assessment and ways of reducing it. Radiation danger and anti-radiation protection at objects with radiation-nuclear technologies.	2
13.	Hygienic assessment of anti-radiation protection of personnel and radiation safety of patients when using radionuclides and other sources of ionizing radiation in medical facilities.	2
14.	Organization of sanitary supervision of accommodation, food and water supply of military formations, injured population and emergency rescue formations.	2
<b>Section 2 . Health care organization</b>		
15	Types of medical care. Organization of providing primary medical care to the population.	2
16	Organization of out-of-hospital (specialized and highly specialized) medical care for the population.	2

17	Organization of inpatient medical care for the population.	2
18	Analysis of the activity of the emergency (ambulance) medical service.	2
19	Medical and social security of the elderly population. Palliative and hospice care.	2
20	Organization and content of work of institutions providing obstetrics and gynecology help	2
21	Organization of medical care for children, accounting and analysis of the activities of institutions	2
22	Peculiarities of the organization of medical care for patients with infectious diseases	2
23	Military medicine: peculiarities of the organization of medical assistance to military personnel.	2
24	Protection of mental health.	2
25	Organization of disability examination, procedure for its implementation.	2
26	Medical rehabilitation: features of use for different contingents of patients.	2
27	The methodology of conducting expert assessments of the quality of medical care for the population.	2
28	Analysis of factors influencing the activity of health care institutions.	2
29	Health care management. Management decision-making methodology.	2
30	Management and leadership in health care	2
<b>TOTAL:</b>		<b>60</b>

## 7. Topics for independent studies

No s/p	Topic name	Number of hours
<b>Chapter 1. "Hygiene and occupational diseases "</b>		
	<i>Preparation for practical classes</i> – theoretical preparation and development of practical skills	20
	<i>Independent processing of topics that are not included to the classroom lesson plan:</i>	10
1	Sanitary legislation on labor protection. (KzpP of Ukraine).	2
2	Theoretical aspects and methods of prevention of alimentary and alimentary-related diseases.	1
3	Hygiene of labor, physical, psychophysiological education and upbringing of children and adolescents	2
4	Hygienic requirements for the land plot, building and group section of children's and general educational institutions. The principle of functional zoning and its meaning	2
5	The main provisions of the "Radiation Safety Norms of Ukraine (IIRBU-97)" and "Basic Sanitary Rules for Preserving Radiation Safety of Ukraine (OSCU - 2005)"	2
6	Examination of food in conditions of possible contamination with radioactive and poisonous substances and bacterial agents. Stages, powers,	1

	means and methods of examination. Scope and capabilities of laboratory research	
<b>Section 2 . Health care organization</b>		
	<i>Preparation for practical classes</i> – theoretical preparation and development of practical skills	26
	<i>Independent processing of topics that are not included to the classroom lesson plan:</i>	24
7	Specialized dispensaries in Ukraine: activity and development prospects.	2
8	Perinatal centers are a new form of maternal and child health care. Reasons and consequences of implementation.	2
9	Children's homes as institutions of medical and social protection: problems and prospects of development.	2
10	Medical and social security of the elderly population.	2
11	Specialized facilities for the elderly (geriatric service)	2
12	Organization and content of the work of institutions of the maternity and childhood care system.	2
13	Sanatorium-resort service in Ukraine: network of establishments, their activities	2
14	Medical education in Ukraine. System of advanced training of doctors: institutions, certification, categories.	2
15	Staffing of the healthcare system in Ukraine.	2
16	Pharmaceutical industry in Ukraine: network of institutions, activity and development prospects.	2
17	Medical science in Ukraine: network of research institutions, scientific degrees in medicine, National Academy of Medical Sciences of Ukraine.	2
18	Criteria of medical and social effectiveness of medical institutions in different countries of the world (on the example of a separate country	2
<b>Total hours per discipline</b>		<b>80</b>

## **9. Individual tasks - not provided by the program.**

### **10. Teaching methods**

According to the sources of knowledge, teaching methods are used: verbal - story, explanation, lecture, instruction; visual - demonstration, illustration; practical - practical work, problem solving. According to the nature of the logic of knowledge, methods are used: analytical, synthetic, analytical-synthetic, inductive, deductive. According to the level of independent mental activity, the following methods are used: problem-based, searching, research.

1. Verbal methods: lecture, conversation;
2. Team-based learning (TBL). Team-oriented training.
3. Research-based learning (RBL). Learning through research
4. Exchange of opinions (think-pair-share).

### **11. Control methods**

**Current control** is carried out on the basis of control theoretical knowledge, practical skills and abilities.

**Forms of current control** are: *in* the dream survey (frontal, individual, combined), interview; practical verification of professional skills (conducted based on the results of practical work at the end of the class); test control ("open" and "closed" test tasks).



Current control is mandatory. During the evaluation of mastering of each topic from all disciplines of the curriculum for the current educational activity, the student is given grades on a 4-point (traditional scale) taking into account the approved evaluation criteria for the discipline. All types of work provided by the curriculum are taken into account. The student must receive a grade in each topic. The teacher conducts a survey of each student in the group at each lesson and assigns a grade in the journal of attendance and student success according to the traditional scale ("5", "4", "3", "2").

When evaluating the student's current educational activity, 20% of the grade is the student's independent work, which takes into account the knowledge of the topic of independent study and the performance of work in the notebook.

The final (summary) control of the sections is carried out at the end of the section in the form of a written test, which includes test tasks from the "Step-1" bank, theoretical questions and control of practical skills (solving situational problems, defining and describing macro- and micropreparations, etc.) .

Such methods of control as oral, written and test are used, which should contribute to increasing the motivation of students-future specialists for educational and cognitive activities. According to the specifics of professional training, preference is given to test and written control. In the case of final control, preference is given to written or test control.

## **12. Form of final control of study success .**

The final control of the discipline is carried out on the basis of theoretical control knowledge, practical skills and abilities.

**An exam** is a form of final control of a student's assimilation of theoretical and practical material from an educational discipline.

### **Scheme of calculation and distribution of points received by students.**

The maximum number of points for a discipline is 200 points. The ratio between the results of the evaluation of the current educational activity and the final control of knowledge is 60% and 40%.

**The study of the discipline** ends with a final control in the form of an exam.

Only those students who do not have academic debt (all missed classes have been completed) and whose average score for the current educational activity in the academic discipline is at least "3" are admitted to the exam.

**The maximum number of points** that a student can score for the current educational activity for admission to the exam is 120 points and is defined as the sum of the arithmetic average of all grades received in the semester.

**The minimum number of points** that a student must score for the current educational activity for admission to the exam is 72 points. Recalculation of the average grade for the current academic performance (on a 120-point scale) in the table. 1.

**Table 1.**

**Recalculation of the average grade for the current academic performance in a multi-point scale for disciplines ending with an exam**

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	120	4.29	103	3.58	86
4.96	119	4.25	102	3.54	85
4.92	118	4.21	101	3.50	84
4.87	117	4.17	100	3.46	83
4.83	116	4.12	99	3.42	82
4.79	115	4.08	98	3.37	81
4.75	114	4.04	97	3.33	80
4.71	113	4.00	96	3.29	79
4.67	112	3.96	95	3.25	78
4.62	111	3.92	94	3.21	77
4.58	110	3.87	93	3.17	76
4.54	109	3.83	92	3.12	75
4.50	108	3.79	91	3.08	74
4.46	107	3.75	90	3.04	73
4.42	106	3.71	89	3	72
4.37	105	3.67	88	3	Less than Not enough
4.33	104	3.62	87		

The maximum number of points that a student can score when taking the exam is 80 (the minimum number is at least 50).

Discipline assessment is defined comprehensively as the sum of points for the current educational activity and points for the exam.

From the allocated 120 points for the current educational activity, 4 to 12 additional points are allocated for the assessment of individual independent work of higher education applicants, according to the work curriculum. Encouragement points are added to the final grade for the discipline at the end of its study.

Discipline points for students who have successfully completed the program are converted to the national scale and ECTS system (Table 2).

**Table 2**

**Rating scale: national and ECTS**

Total points for all species educational activity	Evaluation of ECTS	Evaluation on a national scale	
		for an exam, a diploma	for credit
180-200	AND	Perfectly	counted
160-179	IN	Fine	
150-159	WITH	Satisfactorily	
130-149	D		
120-129	E	unsatisfactory with the possibility of refolding	not counted with possibility rearrangement
50-119	FX		
0-49	F	unsatisfactory with mandatory repeated study disciplines	not counted with mandatory repeated study disciplines

### **13. Methodological support**

1. Working curriculum of the discipline;
2. Plans of lectures, practical classes and independent work of students;
3. Multimedia, video and sound reproduction, projection equipment (video cameras, projectors , screens, smartboards , etc.)
4. Methodical instructions for practical classes for students;
5. Methodical materials that ensure independent work of students;
6. Test and control tasks (STEP 2) before practical classes

### **14. Recommended literature.**

#### **To Chapter 1 "Hygiene and occupational diseases "**

##### **1. Basic literature (basic):**

1. Hygiene and ecology : textbook / [IN. G. Bardov , WITH. T. Omelchuk, N. IN. Merezhkina and etc.]; in general \_ editorial office IN. G. Bardova. – Vinnitsa: Nova book, 2020. - 572 with.
2. Hygiene and epidemiology in the system of military medical training and medicine emergency situations / S. Bondar , T. Gut, R. Gut. - Kyiv: "Medicine", 2018. - 344 p
3. Foundations ecology and preventive medicine : textbook / D. AT. Lastkov , AND. IN. Serget , AT. IN. Fast and others - K : VSV "Medicine", 2017. - 472 p.
4. General hygiene. Social and hygienic monitoring: учеб. for universities / P.I. Melnychenko [and others]: under the editorship. P.I. Melnychenko. - M.: Practical Medicine, 2015. – 512 p.
5. Basics of ecology: textbook for students . of higher education institutions / [V. H. Bardov , V.I. Fedorenko, IS. M. Biletska and others .]; by ed. IN. G. Bardova, IN. AND. Fedorenko. – Vinnitsa : Nova Book, 2013. – 424 p.
6. Hygiene with the basics of ecology: educational and methodical manual (University I-III year)/ L. IN. Dovzhenko, AND. K. Linkova . - Kyiv: "Medicine", 2017. – 49 with.
7. Radiation hygiene/ V.O. Murashko, D.S. Mechev , V.G. Bardov et al. - Vinnitsa : Nova Book, 2013. – 376 p.

##### **2. Supporting literature:**

1. Infectious diseases: textbook / V.M. Kozko , G.O. Solomennyk , K.V. Yurko et al. - VSV Medicine, 2019. - 312 p.
2. Apanasenko G.L. Introduction to the new paradigm of health care . Health and fitness.- Kyiv : Yurka Yubchenkr Publishing House . 2020, 287 p.
3. Healthy Lifestyle. Study guide Olha Ezhova. –Kyiv "University Book", 2017. – 127 p.
4. Dmytrotsa O. The assessment of motor activity of the high school students during the COVID-19 pandemic // Health security the cross-borde cooperation area of the Poland - Belarus-Ukraine program ( May 19-21 , 2021, Lutsk ).
5. Dmytrotsa. Peculiarities of dental health indicators of smokers depending on the duration of smoking / O. Dmytrotsa , I. Kotsan , A. Morenko , S. Shvayko, N.

- Yanko, A. Poruchynskiy , N. Shevchuk // Wiadomości Lekarskie 2018, tom LXXI, nr 4. - P. 937 (based on the materials of the All-Ukrainian scientific and practical conference with international participation "Poltava Public Health Days", Poltava - May 24-25, 2018.
6. Fundamentals of preventive medicine: a textbook / P.S. Bebeshko, Yu.S. Skorobekha , O.P. Korinyak. - 2nd ed., revision. and additional \_ – K.: VSV "Medicine", 2011. – 184 p. - Vulture of the Ministry of Health. - 400 p.
  7. Hygiene of children and adolescents: a guide for students of universities of III-IV levels of accreditation / edited by M.M. Outside . Odesa: Press-courier, 2014. 263 p.
  8. Electronic guide to studying the course "School hygiene and peculiarities of hygienic education of children and adolescents in specialized institutions" / P.M. Polushkin Donetsk: DNU, 2014. 176 p.
  9. Sanitary regulations for institutions of general secondary education <https://eo.gov.ua/2020/12/15/novyy-sanitarnyy-rehlament-dlia-shkil-shcho-zminylosia/>
  10. Physical development of the child: education . manual for students of the 3rd year of med. of the faculty / O. G. Ivanko, M. V. Patsera , N. V. Kyzima [etc.].– Zaporizhzhia: [ZDMU], 2013. 65 p.
  11. Dmytrotsa O.R. Indicators of blood oxygen saturation of schoolchildren living in a radioactively contaminated territory // Scientific and practical conference dedicated to the sixteenth reading of Marzeyev "Physical factors of the environment and their influence on the formation of the health of the population of Ukraine": Collection . theses add ., Issue 20 // organizing committee: A.M. Serdyuk (head) [etc.]. K.: "Advertising agency TR Studio ". 2020. 244 p.
  12. Hygiene and ecology in terms, schemes, tables and tests: education . help of V.F. Moskalenko, O.P. Yavorovskyi , D.O. Lastkov , S.I. Garkavy and others. K.: VSV "Medicine", 2012. - 208 p.
  13. Chaplyk V.V. Emergency medicine: a textbook for higher medical students. teach \_ institutions / Chaplyk V.V., Oliynyk P.V., Omelchuk S.T. - Vinnytsia: New Book, 2012. - 352 p

### **Information resources**

1. Ministry of Health of Ukraine <https://moz.gov.ua/>
2. Public Health Center <https://phc.org.ua/>
3. <https://zakon.rada.gov.ua/laws/show/1005/96>
4. <https://zakon.rada.gov.ua/rada/show/v0062282-97#Text>

### **To Chapter 2 " Organization of health care"**

#### **Basic (basic)**

1. Public health and behavioral economics / V. O. Kurganska, V. A. Smiyanov , O. I. Smiyanova // Herald of social hygiene and health care organizations of Ukraine. - 2019. - No. 2 (80). - P. 33-39.
2. Rational and safe nutrition as the basis of public health: a study guide / A. G. Dyachenko, V. A. Kurganskaya , V. V. Kasyanchuk and others. – Sumy: Sumy

- State University, 2017. – 354 p
3. Golyachenko O.M. Social medicine and the organization of health care .-Kyiv: VSV "Medicine", 2011.- 208 p.
  4. Public health: a national textbook/ V.F. Moskalenko , O.P. Gulchii , T.S. Gruzeva and others, ed . V.F. Moskalenko ; Ministry of Health of Ukraine; O.O. Bogomolets National Medical University - 3 ed. Vinnytsia: New Book, 2013. - 560 p.
  5. Collection of test tasks for state examinations in hygiene, social medicine, organization and economics of health care / edited by V.F. Moskalenko , V.G. Bardova , O.P. Yavorskyi . - Vinnytsia: Nova kniga, 2012. - 200 s.
  6. Economics of health care: Textbook / V.F. Moskalenko , O.P. Gulchii , V.V. Ruden and others; under the editorship .. V.F. Moskalenko .- Vinnytsia: Nova kniga, 2010.- 288 p.
  7. Baeva O.V. Insurance medicine and medical insurance: teaching . manual ./ O.V. Baeva .- K.: VD "Personal", 2013.-432 p.
  8. Baeva O.V., Cheban V.I. Economics and entrepreneurship in health care. Study \_ manual. – Chernivtsi: BDMU Publishing House, 2013. – 360 p.
  9. Solonenko N.D. Economics of health care: education . manual/K.: SE " Personnel Publishing House ", 2014.-408 p.
  10. Baeva O.V., Cheban V.I. Management and organization of the work of medical and preventive institutions. Study \_ manual. Part 1 Chernivtsi: Publishing House of the BSMU - 2013. - 372 p.
  11. Baeva O.V., Cheban V.I. Management and organization of the work of medical and preventive institutions. Study \_ manual. Chernivtsi: BSMU Publishing House. Part 2 - 2013. - 308 p.

### **Auxiliary:**

1. Baeva O.V. Management in the field of health care: Education. Manual.-K.: TsUL, 2008, 640 p.
2. Health care of Ukraine: state, problems, prospects/ L.A.Chepelevska, O.R.Sytenko, V.V. Poor and others; under the editorship of Lazoryryshyntsia. - K.: 2014. - 607 p.
3. Health care in Ukraine: organization and legislative support: monograph / A.I. Kozachenko, V.M. Pashkov, V.P. Lysak and others, according to ag. Edited by V.P. Lysak, V.M. Pashkov, I.A. Golovanova .- K.: MORION, 2014.-335 p.
4. Saltman RB, Figueiras J. Reforms of the healthcare system in Europe. Analysis of modern strategies / Trans. with English -M.: GEOTAR Medicine, 2000. 423 p.
5. Semigina T.V. Analysis of health care policy: a study guide/ T.M. Semigina.- K.: NaUKMA, 2012.- 479 p.
6. State policy on public health protection in Ukraine: training. manual / I.M. Solonenko, L.I. Pity -the driver. author. collective / K.: Publishing House of the Ukrainian Academy of Sciences, 2004. 140 p.
7. Barrachina J. Axis II comorbidity in borderline personality disorder is influenced by sex, age, and clinical severity./ Barrachina J, Pascual JC, Ferrer M, Soler J,

- Rufat MJ, Andi3n O, Tiana T, Mart3n-Blanco A, Casas M , P3rez V.// Compr Psychiatry. 2011.- 22.
8. Buitelaar JK, Functional improvement and correlations with symptomatic improvement in adults with attention deficit hyperactivity disorder receiving long-acting methylphenidate./ Buitelaar JK, Casas M, Philipsen A, Kooij JJ, Ramos-Quiroga JA, Dejonckheere J, van Oene JC, Sch3uble B .// Psychol Med. 2011 .- 1:1-10.
  9. Erlandson E. Improving the efficiency of health care spending: selected evidence on hospital performance//OECD economics department working paper.-2007.- N.555.-9 p.
  - 10.Feldstein P. Health Care Finance and Economics.6<sup>rd</sup> ed. Thomson Delmar Learning, 2004
  - 11.Getzen TE: Health Economics Fundamentals and Flow of Funds. 2<sup>nd</sup> J. Wiley Sons, 2004
  - 12.Henderson J. Health Economics and Policy. 3<sup>rd</sup> ed. Thomson - South Western, 2005
  - 13.Implementing Health Financing Reform. Lessons from countries in transition / European Observatory on Health Systems and Policies; ed.: J. Kutzin, C. Cashin, M. Jakab. - Copenhagen: WHO, 2010. - 411 p. -
  - 14.Kolb D., Horowitz J. Managing the translation to capitation //Healthcare Financial Management. Healthcare Financial Management. February. 1995. V. 49. No. 2. R. 64-692
  - 15.Phelps C. Health Economics. 3<sup>rd</sup> Boston: Addison Wesley, 2002
  - 16.Thomson S, Mossialos E. What are the consequences of private financing of health services in Western Europe in terms of equity, efficiency, cost reduction, and choice? What are the equity, efficiency, cost containment and choice implications of private healthcare funding in western Europe? Copenhagen, WHO Regional Office for Europe (Health Evidence Network report; <http://www.euro.who.int/Document/E83334R.pdf>, accessed 07 July 2004).
  - 17.Resolution of the Cabinet of Ministers of Ukraine "On approval of the Procedure for conducting activities related to the circulation of narcotic drugs, psychotropic substances and precursors, and control over their circulation" dated June 3, 2009 No. 589.
  - 18.Resolution of the Cabinet of Ministers of Ukraine "On Approval of the Model Regulation on the Center for Emergency Medical Aid and Disaster Medicine" dated February 8, 2012 No. 84
  - 19.Order of the Ministry of Health of Ukraine "On approval of the lists of health care institutions, doctors, pharmacist positions and positions of junior specialists with pharmaceutical education in health care institutions" dated 11.12.2002 No. 385 (With changes and additions, introduced by the Order of the Ministry of Health of Ukraine dated March 17, 2003 No. 114)
  - 20.Law of Ukraine "On the procedure for reforming the health care system in Vinnytsia, Dnipropetrovsk, Donetsk regions and the city of Kyiv"// VVR.-2011 .-№ 3612-VI
  - 21.Draft Law of Ukraine "On Health Care Institutions ""

22. Order of the Ministry of Health of Ukraine "Procedure for the organization of medical care and referral of patients to health care institutions providing secondary (specialized) and tertiary (highly specialized) medical care" dated October 5, 2011 N 646
23. Order of the Ministry of Health of Ukraine "On Approval of Model Regulations on Health Care Institutions" dated December 30, 2011 No. 1008
24. Order of the Ministry of Health of Ukraine "On approval of the Model report card for equipping medical and preventive units of health care institutions that provide primary medical (medical and sanitary) care" dated February 23, 2012 No. 132
25. Order of the Ministry of Health of Ukraine "On approval of the Model Regulation on the center of primary medical (medical and sanitary) care and model regulations on its subdivisions" dated February 23, 2012 No. 131
26. Order of the Ministry of Health of Ukraine "On Approval of the Sample List of Laboratory Tests Performed When Providing Primary Medical Aid to the Population" dated February 23, 2012 No. 130
27. Order of the Ministry of Health of Ukraine "On the approval of the sample staffing standards of the center of primary medical (medical and sanitary) care" dated February 23, 2012 No. 129

#### **Information resources**

1. World Health Organization [www.who.int](http://www.who.int)
2. European database "Health for all" [www.euro.who.int/ru/home](http://www.euro.who.int/ru/home)
3. Cochrane Center for Evidence-Based Medicine [www.cebm.net](http://www.cebm.net)
4. Cochrane Library [www.cochrane.org](http://www.cochrane.org)
5. US National Library of Medicine - MEDLINE  
[www.ncbi.nlm.nih.gov/PubMed](http://www.ncbi.nlm.nih.gov/PubMed)
6. Canadian Center for Evidence in Health [www.cche.net](http://www.cche.net)
7. Center for Disease Control and Prevention [www.cdc.gov](http://www.cdc.gov)
8. Public Health Center of the Ministry of Health of Ukraine [www.phc.org.ua](http://www.phc.org.ua)
9. Ukrainian database of medical and statistical information "Health for all":  
<http://medstat.gov.ua/ukr/news.html?id=203>
10. British Medical Journal [www.bmj.com](http://www.bmj.com)
11. Journal of Evidence-Based Medicine [www.evidence-basedmedicine.com](http://www.evidence-basedmedicine.com)
12. <http://zakon3.rada.ua/lows>
13. <http://mozdocs.riev.ua>
14. <http://euro.who.inf>
15. [www.moz.gov.ua](http://www.moz.gov.ua)