

MINISTRY OF PUBLIC HEALTH OF UKRAINE  
KHARKIV NATIONAL MEDICAL UNIVERSITY

Department of Hygiene and ecology No 1  
2021-2022 academic year

**SYLLABUS OF THE EDUCATIONAL COMPONENT**  
**“Hygiene and ecology”**

Normative or selective educational component: normative

The form of education internal  
(internal; correspondence; distance)

Field of knowledge 22 "Health Care"  
(The code and the name of field of knowledge)

Specialty 222 "Medicine"  
(The code and the name of specialty)

Educational and professional program  
of the second (master's) level of higher education

**Year 2<sup>nd</sup>**

Syllabus of the educational component

approved at the meeting  
of Department of Hygiene and Ecology No.1

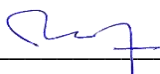
approved by Methodical Commission of KhNMU  
on Problems of Public Health


Record of proceedings dated  
“27” August 2021 No. 1

Record of proceedings dated  
“01” September 2021 No. 2

Head of Department

Head of Methodical Commission

  
\_\_\_\_\_ Korobchanskiy V.O.

  
\_\_\_\_\_ Ognev V.A.

“ ” \_\_\_\_\_ 2021

“ ” \_\_\_\_\_ 2021

## **Information about teachers**

**Developer of syllabus:** Gerasymenko Olga Igorivna, Candidate of Biological Sciences, Associate Professor

**Data about teachers, which teach the discipline**

**Gerasymenko Olga Igorivna**, Candidate of Biological Sciences, Associate Professor  
Professional interests: hygiene and ecology, hygiene of children and teenagers, psychohygiene, environmental health  
Contact phone: (057) 705-15-74  
Corporative E-mail of teacher: oi.herasymenko@knmu.edu.ua  
Consultations: according to the schedule of the department by prior arrangement with the teacher  
Location: Trinklera str., 6, 3d floor, Department of Hygiene and Ecology No 1.

**Katelevskaya Natalia Mykolaivna**, Candidate of Medical Sciences, Associate Professor  
Professional interests: hygiene and ecology, psychohygiene, communal hygiene, environmental health  
Contact phone: (098)4602816  
Corporative E-mail of teacher: nm.katelevska@knmu.edu.ua  
Consultations: according to the schedule of the department by prior arrangement with the teacher  
Location: Trinklera str., 6, 3d floor, Department of Hygiene and Ecology No 1.

**Oliinyk Yuliia Oleksandrivna**, Candidate of Medical Sciences, Associate Professor  
Professional interests: hygiene and ecology, hygiene of children and teenagers, psychohygiene, environmental health  
Contact phone: (050)5785385  
Corporative E-mail of teacher: yo.oliinyk@knmu.edu.ua  
Consultations: according to the schedule of the department by prior arrangement with the teacher  
Location: Trinklera str., 6, 3d floor, Department of Hygiene and Ecology No 1.

**Hrihorian Olena Valerikivna**, Candidate of Medical Sciences, Associate Professor  
Professional interests: hygiene and ecology, occupational hygiene, psychohygiene, environmental health  
Contact phone: (097)5562522  
Corporative E-mail of teacher: ov.hryhorian@knmu.edu.ua  
Consultations: according to the schedule of the department by prior arrangement with the teacher  
Location: Trinklera str., 6, 3d floor, Department of Hygiene and Ecology No 1.

**Bohacheva Olha Serhiivna**, Candidate of Medical Sciences, Associate Professor  
Professional interests: hygiene and ecology, hygiene of children and teenagers, psychohygiene, environmental health, hygiene of emergencies  
Contact phone: (057)705-15-74  
Corporative E-mail of teacher: os.bohachova@knu.edu.ua  
Consultations: according to the schedule of the department by prior arrangement with the teacher  
Location: Trinklera str., 6, 3d floor, Department of Hygiene and Ecology No 1.

**Staruseva Victorija Vadymivna**, Candidate of Medical Sciences, Associate Professor  
Professional interests: hygiene and ecology, hygiene of children and teenagers, psychohygiene,  
Contact phone: (068)7464834  
Corporative E-mail of teacher: vv.staruseva@knu.edu.ua  
Consultations: according to the schedule of the department by prior arrangement with the teacher  
Location: Trinklera str., 6, 3d floor, Department of Hygiene and Ecology No 1.

**Sarkis-Ivanova Vladyslava Vadymivna**, Candidate of Medical Sciences, Senior Lecturer  
Professional interests: hygiene and ecology, hygiene of children and teenagers, psychohygiene, hospital hygiene  
Contact phone: (057)705-15-74  
Corporative E-mail of teacher: vv.sarkis-ivanova@knu.edu.ua  
Consultations: according to the schedule of the department by prior arrangement with the teacher  
Location: Trinklera str., 6, 3d floor, Department of Hygiene and Ecology No 1.

**Offline consultations:** in classrooms of Department of hygiene and ecology No 1 according to the schedule of the department.

**Online consultations:** in Moodle, Zoom, Google Meet and other sources according to the schedule of the department by prior arrangement with the teacher.

## INTRODUCTION

**Syllabus of the educational component** “Hygiene and ecology” is compiled in accordance with the educational and professional program (hereafter - EPP) "Medicine" and the Standard of Higher Education of Ukraine (hereafter - the Standard), the second (master's) level, in the field of knowledge 22 "Health Care", Specialty 222 “Medicine”.

**Description of discipline:** Hygiene and ecology as educational discipline which sets the foundations of study of factors of environment and their influence on the common human health; arms doctors with practical skills for realization of certain prophylactic measures, in relation to following a healthy and sick man rules of the personal hygiene, hygiene of nutrition, way of life, labour, child-rearing and education of children and teenagers, maintenance of medical and preventive establishments in the proper sanitary state, providing of radiation safety of patients and personnel of establishments; opens wide possibilities for forming for the future doctors of the prophylactic thinking, arms them with fundamental theoretical knowledge and practical skills, sent to maintenance and strengthening of general health, continuation of creative longevity and life-span on the whole.

Discipline lays basics of understanding the importance of preventive medicine and protection environment to preserve and enhance the health of the population. Study of the basics of hygiene and ecology, special issues of hygiene, as well as environmental problems, necessary for future masters of medicine, to understand the patterns of environmental impact on individual and population health, ensuring proper working conditions, organization and observance of sanitary-hygienic and anti-epidemic regime, development and implementation of preventive measures to preserve health and safety of environment.

**The subject of study** of the discipline is study of the impact of environmental factors on humans, assessment of health risk factors and justification of measures aimed at disease prevention, ensuring optimal living conditions, strengthening health and prolonging human life, working out preventive measures for environmental protection.

**Pre-requisites.** The discipline is based on the study by students of the study of medical biology, medical and biological physics, medical chemistry, biological and bioorganic chemistry, human anatomy, safety of vital functions, basis of labour protection and integrates with these disciplines.

**Post-requisites.** It lays the foundations for students to study physiology, pathology, toxicology and propaedeutics of medical disciplines, which involves the integration of teaching with these disciplines and the formation of skills to apply knowledge of hygiene and ecology in the process of further training and professional activity.

**Link to the discipline page in Moodle system:**

<http://31.128.79.157:8083/course/index.php?categoryid=369>

## 1. AIM AND TASKS OF EDUCATIONAL DISCIPLINE

1.1. **The aim of study of educational discipline** “Hygiene and ecology” is in formation of future specialists (masters) skills and competencies to provide preventive guidance in the practice of the doctor.

1.2. **Main tasks of study of educational discipline** “Hygiene and ecology” are laying the theoretical foundations of hygiene and ecology, as science (terminology, laws, methodology, principles of hygienic regulation, regulatory and methodological support for the application of preventive measures) and development of practical skills in prevention of diseases of infectious and non-infectious origin in accordance with current legislation of Ukraine; mastering laboratory research methods (organoleptic, physical, chemical, biological, bacteriological methods); use of favorable health factors of the natural environment to strengthen human health, harden the body, the studying the influence of environmental factors on human health, working capacity and life expectancy, in order to optimize favorable and prevent adverse effects by developing standards, requirements and sanitary measures aimed at improving the health of populated areas, living conditions and human activities, and the formation on this basis of hygienic-scientific thinking necessary for successful training of specialists who have a significant amount of theoretical and practical knowledge about the influence of factors of the natural and modified environment on the state of health of a person and society, and providing a theoretical basis for the study of other medical and biological disciplines etc.

1.3. **Competencies and results of education** 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 EPP and Standard).

1.3.1 The study of the discipline provides students with the acquisition of **competencies:**

**integral:** ability to integrate knowledge and solve the typical and complex specialized problems in new or unfamiliar environments with incomplete or limited information taking into account aspects of social and ethical responsibility in a multidisciplinary context based on conceptual knowledge, including modern scientific advances in health, with the ability clear and reasoned conclusions to specialists and non-specialists, as well as a basis for original thinking, continuing education with a high degree of autonomy and research.

**general:** ability to abstract thinking, analysis and synthesis, 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 of using information and communication technologies; certainty and persistence in relation to the set tasks and responsibilities; ability to act socially responsibly and consciously; the desire to preserve the environment

**special (professional, subjective):** survey skills; ability to determine the necessary mode of work and rest, the nature of nutrition in the treatment of diseases; ability to carry out medical and evacuation measures; ability to plan and carry out sanitary and hygienic, preventive and anti-epidemic measures, including on infectious diseases; ability to conduct an examination of working capacity; ability to keep medical records; ability to conduct epidemiological and medical-statistical studies of public health; processing of state, social, economic and medical information; ability to assess the impact of the environment, socio-economic and biological determinants on the health of the individual, family, population; ability to analyze the activities of a doctor, department, health care institution, take measures to ensure the quality and safety of medical care and increase the efficiency of medical resources; ability to carry out measures for the organization and integration of medical care, and marketing of medical services.

1.3.2. The study of the discipline provides students with the following **program learning outcomes**: acquisition of general and special fundamental and professionally-oriented knowledge, skills, competencies necessary to perform typical professional tasks related to its activities in the medical field in the relevant position; knowledge of psychophysiological features of the person, human health, support of health, prevention of diseases, treatment of the person, health of the population; 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; collection of patient information; evaluation of survey results, physical examination, laboratory and instrumental research data; diagnosing emergencies, determining the tactics of emergency medical care; carrying out sanitary and hygienic and preventive measures; planning of preventive and anti-epidemic measures for infectious diseases; carrying out medical and evacuation measures; assessment of the impact of the environment on the health of the population; maintenance of medical documentation, processing of state, social and medical information Formation of judgments; ability to assess the sanitary and hygienic condition of the environment in order to determine the sanitary and hygienic and preventive measures; ability to 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; 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 provides students with the following **social skills (soft-skills)**: communicativeness (implemented through the method of working in groups and brainstorming during the analysis of conditions of situational tasks and cases, the method of presenting the results of independent work and their defence in the group); teamwork (implemented through group work method and brainstorming during the analysis of conditions of situational tasks and cases); conflict management (implemented through group work method and brainstorming, business games); time management (implemented through the method of self-organization during classroom work in groups and independent work); leadership skills (implemented through the method of presenting the results of independent work and their defense in the group).

## 2. INFORMATION VOLUME OF EDUCATIONAL DISCIPLINE

Name of indexes	Area of knowledge, direction of preparation, educationally-qualifying level	Characteristic of educational discipline	
		daily form of studies	
Number of credits – <b>3</b>	Direction of training <b><u>22 Health Care</u></b>	normative	
Total number of hours - <b>90</b>	Speciality: <b><u>222 Medicine</u></b>	<b>Year of training:</b>	
		<b>2<sup>nd</sup></b>	-
		<b>Semester</b>	
		<b>4<sup>th</sup></b>	
		-	
		<b>Lectures</b>	
		20 h.	
		<b>Practical, seminar</b>	
Hours for daily form of studies: auditorium – <b>50</b> independent work of student - <b>40</b>	Educational-qualifying degree: <b>«Master»</b> in speciality «Medicine »	30 h.	
		<b>Laboratory</b>	
		-	
		<b>Independent work</b>	
		40 h.	
		<b>Individual task:</b>	
		-	
		<b>Kind of control: credit</b>	

### 2.1. Lectures

№	Name of theme	Number of hours	Type of lecture
1	Hygiene and ecology as a branch of medical science and public health, it's aim, tasks, content. Prophylactic orientation of medicine, public and personal prophylaxis; primary, secondary and tertiary prophylaxis. Importance of hygiene in practical activity of doctors of different professions.	2	On-line lecture in synchronous format
2	Environment and health. Biosphere, it's constituents. Influence of environment on a population health. Prophylaxis of ecological diseases.	2	On-line lecture in synchronous format
3	Hygiene of atmospheric air. Physical and chemical properties of atmospheric air, their significance. Natural radiation, it's hygienic significance.	2	On-line lecture in synchronous format



4	Solar radiation, its hygienic value. Hygienic significance of climate and weather. Medical classification of climate and weather. Heliometeotropic and climatotropic reactions, their prophylaxis. Acclimatization, it's features in different climatic zones.	2	On-line lecture in synchronous format
5	Water as the health factor, its physiological, hygienic and epidemiological significance. Importance of the water and for the infectious and parasitical diseases spreading. Water as an etiological factor of non-infectious diseases. Hygienic requirements to the drinking water quality Organization of the drinking water supply. Ecological problems and sanitary protection of watersources.	2	On-line lecture in synchronous format
6	Soil and health. Ecological problems and sanitary conditions of soil. Sources of soil pollution. Importance of soil in becoming and spreading of infectious and non-infectious diseases. Process and indices of soil self-purification.	2	
7	Hygiene of the settlements. Problems of urbanization. Living conditions in the settlements and human health. Planning and building up of settlement. Principles of the functional zoning of territory of settlements. Factors of urbanization, their sources and influence on a population health. Hygiene of dwellings. Hygienic significance of microclimate, air environment, natural and artificial illumination, their hygienic estimation.	2	On-line lecture in synchronous format
8	Hygiene of nutrition. Significance of nutrition for health and physical development. Concept of the organism nutritional status. Theories of nutrition, functions of meal. Scientific basics of rational, preventive, medical, diet nutrition. Alimentary diseases, their classification and prophylaxis. Genetically modified products and their hygienic characterisric.	2	On-line lecture in synchronous format
9	Hygiene and physiology of labour. Classification of hazardous factors of the labour and industrial environment. Tiredness and overstrain, events of warning of overstrain. Physiological and hygienic requirements to the rational regimen of labour and rest. Occupational diseases and poisonings, general preventive measures. Sanitary legislation on the labour protection	2	On-line lecture in synchronous format
10	Healthy lifestyle, personal hygiene and psychohygiene. Healthy lifestyle: determination, content. A role of	2	On-line lecture in synchronous

	<p>lifestyle in maintenance and strengthening of health. Risk of unhealthy lifestyle of endogenous and exogenous character factors: excessive body weight and obesity, hypodynamia, low medical activity, harmful habits (smoking, alcohol abuse, drug addiction, glue-sniffing and other). Personal hygiene, its significance for maintenance and strengthening of health. Physical activity, tempering. Hygiene of clothing and shoe. Concept of psychohygiene, psychoprophylaxis, medical biorythmology and chronohygiene. Their importance for the human health</p>		format
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--------

2.2. **Seminars** not used

2.3. **Practical classes**

№	Name of topic	Number of hours	Methods of teaching	Forms of control
1	Introductory lesson. A place and significance of hygiene in the system of medical sciences and practical activity of doctor. Research methods used in hygiene	2	explanation, discussion, illustration, presentation, videos	oral examination (individual and frontal); written response, on-line test using Moodle platform
2	Hygienic estimation of solar energy. Methods of determination of ultra-violet radiation. Methods of determination and hygienic assessment of natural lighting and artificial illumination in different premises.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, situational tasks	oral examination (individual and frontal); written response, on-line test using Moodle platform
3	Method of determination and hygienic estimation of indexes of microclimate. Hygienic estimation of complex influence of parameters of microclimate on the human heat exchange.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, situational tasks	oral examination (individual and frontal); written response, on-line test using Moodle platform
4	Basic indexes of cleanness of air in premises, carbon dioxide as an index of anthropogenic air contamination. Ventilation of premises, basic indexes of ventilation efficiency. Methods of investigation and hygienic estimation of dustiness and chemical pollution of	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse,	oral examination (individual and frontal); written response, on-line test using Moodle platform

	air.		situational tasks	
5	Method of sanitary-hygienic inspection of object of sanitary supervision (with drawing-up act of inspection).	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, case-method	oral examination (individual and frontal); written response, on-line test using Moodle platform
6	Method of sanitary inspection of the water-supply sources and water sampling for bacteriological, sanitary and chemical research.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse	oral examination (individual and frontal); written response, on-line test using Moodle platform
7	Method of hygienic estimation of drinking water mineral composition.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, simulation game, case-method	oral examination (individual and frontal); written response, on-line test using Moodle platform
8	Methods and means of the water purification for centralized and decentralized water-supply.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, situational tasks	oral examination (individual and frontal); written response, on-line test using Moodle platform
9	Methods and means of the water disinfection for centralized and decentralized water-supply	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, situational tasks	oral examination (individual and frontal); written response, on-line test using Moodle platform
10	Methods of hygienic assessment of the drinking water based on results of the laboratory analysis of samples of centralized water-supply.	2	explanation, discussion, illustration, demonstration, presentation, videos,	oral examination (individual and frontal); written response, on-line test using Moodle platform

			discourse, case-method, situational tasks	
11	Methods of hygienic assessment of the drinking water based on results of the laboratory analysis of samples of decentralized water-supply.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, case-method, situational tasks	oral examination (individual and frontal); written response, on-line test using Moodle platform
12	Methods of study and hygienic estimation of collective nutrition adequacy (by the data of week menu). Method of calculation of energy consumptions and requirements of human in food substances. The calculation method of individual nutrition adequacy estimation.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, case-method, situational tasks	oral examination (individual and frontal); written response, on-line test using Moodle platform
13	Methods of expert assessment of food products based on results of their laboratory analysis.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, case-method, situational tasks	oral examination (individual and frontal); written response, on-line test using Moodle platform
14	Method of investigation of the food poisoning cases of microbial origin.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, case-method, situational tasks	oral examination (individual and frontal); written response, on-line test using Moodle platform
15	Method of investigation of the food poisoning cases of non-microbial origin.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse, case-method, situational tasks	oral examination (individual and frontal); written response, on-line test using Moodle platform

#### 2.4. Laboratory lessons not used

## 2.5. Independent work

№	Name of topic	Number of hours	Methods of teaching	Forms of control
1	General method of the current sanitary supervision. Methods of sanitary inspection of the object and preparation of the act or sanitary survey or sanitary description.	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
2.	The history of hygiene as a science, the main stages of development and current state of hygiene.	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
3	Hygienic significance of the biosphere components (atmosphere, hydrosphere, lithosphere).	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
4	Endemic goiter as a sanitary problem, its etiology and prevention (seafood, iodized salt).	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
5	Endemic fluorosis and dental caries as a sanitary problem, their prevention (water defluorination, water fluorination).	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
6	Self-purification of water reservoirs. Zones of sanitary protection of water reservoirs.	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
7	Method of hygienic assessment of soil according to the data of sanitary inspection of the site and the results of laboratory analysis of samples. Purification of populated areas	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
8	Methods of study and assessment of the nutritional status of human. Medical supervision to provision of the human organism with vitamins.	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
9	Methods of food preservation, their hygienic characteristics. Food additives, their hygienic characteristics.	2	supervision, consultation	creative tasks; individual tasks;

				presentations, essays
10	Hygienic nutrition surveillance of different ages, professions, patients in hospitals and health institutions. Parenteral nutrition, its hygienic substantiation.	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
11	Nutritional status as an indicator of health. Diseases of malnutrition and overeating.	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
12	Genetically-modified food products, their hygienic characteristics.	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
13	Hygienic assessment of the adequacy of the student individual nutrition according to the menu for the week	2	supervision, consultation	creative tasks; individual tasks; presentations, essays

### 3. CRITERIA OF ASSESSMENT

3.1. 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 KhNMU".

Criteria for evaluating current learning activities:

The grade "EXCELLENT" is given to a student who took an active part in discussing the most difficult questions on the topic of the lesson, gave at least 90% correct answers to standardized test tasks, solved situational problems without mistakes, performed practical work, drew up a protocol, fully substantiated the results.

The grade "GOOD" is given to a student who took part in the discussion of the most difficult questions on the topic of the lesson, gave at least 75% correct answers to standardized test tasks, made some minor mistakes in solving situational problems, did practical work and drew up a protocol, but not fully substantiated the obtained data.

The grade "SATISFACTORY" is given to a student who did not take part in the discussion of the most difficult questions on the topic, gave at least 60% correct answers to standardized test tasks, made significant mistakes in answering written tasks, solves situational problems, performed practical work and drew up a report, but did not fully substantiate the data obtained.

The grade "UNSATISFACTORY" is given to a student who did not take part in the discussion of the most difficult questions on the topic, gave less than 60% of correct answers to standardized test tasks, made gross mistakes in answering written tasks or did not answer them at all, did not do practical work and did not draw up a protocol, can not interpret its results.

During the assessment of mastering each subject of the discipline the student is graded according to the traditional 4-point system: "excellent", "good", "satisfactory" and "unsatisfactory".

Assessment of students' independent work: mastering the topics that are submitted only for independent work is checked during the concluding class.

Assessment of individual scientific-recearsh work of the student: points for individual tasks are accrued to the student only once as a commission (commission - head of the department, head teacher, group teacher) only if they are successfully completed and defended. For carrying out scientific work with publishing of thesis student receives additional 5 points (or it's divided on all students-coauthors), for participation in scientific conference with oral report student receives additional 10 points. In no case the total amount of points may exceed 120 points.

The final score is defined as the arithmetic mean of traditional grades for each lesson, rounded to 2 decimal places and converted into a multi-point scale according to given table and is within limits from 70 to 120. After completing the study of the discipline responsible for the organization of educational and methodical work at the department or the teacher puts the master's grade on the scales (see table) in the record book and fill in the progress of students in the discipline by form.

#### **Recalculation of the average score for current activities in a multi-point scale**

4- score scale	120- score scale	4- score scale	120- score scale	4- score scale	120- score scale	4- score scale	120- score scale
5	120	4.45-4,49	107	3.91-3,94	94	3.37-3,4	81
4.95-4,99	119	4.41-4,44	106	3.87-3,9	93	3.33- 3,36	80
4.91-4,94	118	4.37-4,4	105	3.83- 3,86	92	3.29-3,32	79
4.87-4,9	117	4.33-4,36	104	3.79- 3,82	91	3.25-3,28	78
4.83-4,86	116	4.29-4,32	103	3.74-3,78	90	3.21-3,24	77
4.79-4,82	115	4.25- 4,28	102	3.7- 3,73	89	3.18-3,2	76
4.75-4,78	114	4.2- 4,24	101	3.66- 3,69	88	3.15- 3,17	75
4.7-4,74	113	4.16- 4,19	100	3.62- 3,65	87	3.13- 3,14	74
4.66-4,69	112	4.12- 4,15	99	3.58-3,61	86	3.1- 3,12	73
4.62-4,65	111	4.08- 4,11	98	3.54- 3,57	85	3.07- 3,09	72
4.58-4,61	110	4.04- 4,07	97	3.49- 3,53	84	3.04-3,06	71
4.54-4,57	109	3.99-4,03	96	3.45-3,48	83	3.0-3,03	70
4.5-4,53	108	3.95- 3,98	95	3.41-3,44	82	Less 3	insufficiently

#### **Elimination of academic debt (working off).**

Completion of missed classes for any reason is mandatory for all students, regardless of funding sources.

Classes that were missed for good reasons are practiced free of charge.

Missing classes within one month after their date are carried out without the permission of the dean (deputy dean) and without payment, regardless of the reasons for admission, to the research and teaching staff of the department in free time daily, except Sunday. Regardless of the reasons for absences, students are required to complete the missed classes before the exam session, except in cases of providing an individual schedule in the manner prescribed by the University. It is mandatory to work out

unsatisfactory grades received by a student in class. Working-off the unsatisfactory marks received by the student at the current control is carried out free of charge.

### **3.2 Questions for credit and exam not envisaged**

#### **3.3. Control questions for independent work**

1. The origin of empirical hygiene in primitive society
2. The development of empirical hygiene in the Ancient East (Egypt, Assyrian, Babylonia, Persia, China, India) and in the ancient world (Ancient Greece, Ancient Rome, Byzantium).
3. The contribution of Hippocrates, K.Halen, Ibn Sina (Avicenna), Arnold Villanovy, M.Maymonid in the development of hygiene.
4. Decline of medical and hygienic knowledge in the Middle Ages (feudalism).
5. Development of hygiene in the era of capitalism. Works of D.Frakastoro, B.Ramatstini, M.Lomonosov, M.Levi, E.Parks, F.Esterlen, I.Franko, K.Hufeland.
6. Development of experimental hygiene.
7. Creation of the Department of Hygiene (M.Pettenkofer, O.P.Dobroslavin, F.F.Erysman)
8. The history of hygiene in Ukraine.
9. Lighting and health. Hygienic requirements for lighting. Methods of study and assessment of natural and artificial light. The disorders of health and diseases, resulting in low lighting. Prevention of myopia in children and adolescents.
10. Meteorological factors as industrial hazard. Classification and characteristics of the microclimate. The disorders of health and diseases, caused by the influence of meteorological factors. Measures for prevention.
11. Ventilation and its hygienic value. Hygienic characteristics of species and ventilation devices. Quality and efficiency of air ventilation in the room.
12. The microclimate of the premises and its hygienic value. Classification of microclimate. Hygienic bases of assessment of microclimate in premises. Methods of comprehensive assessment of the impact of meteorological factors on human health.
13. Urbanization and health issues. Hygiene of planning and building settlements. Hygienic value of green spaces.
14. Hygienic requirements for housing. Impact of housing conditions on the health and human performance.
15. Water as the causative factor of diseases of infectious nature. The concept of biogeochemical province. Endemic diseases associated with the consumption of poor quality water.
16. The biological role of iodine and hygienic value. The iodine content in water and food; the recommended iodine for various age groups in Ukraine.
17. Endemic goiter as hygienic problems, its etiology, clinical manifestations.
18. Prevention of iodine deficiency (mass, individual) as a hygienic problem.
19. Water as a causative factor of diseases of infectious nature. The concept of biogeochemical province. Endemic diseases associated with the consumption of poor quality water; endemic shortage and excess.
20. Biological role and hygienic evaluation of fluoride, its maximum allowable concentration in water, soil.



21. Fluoride as toxicological indicator of water quality, hygienic standards of fluoride in drinking water and their scientific substantiation depending on the climatic region.
22. Endemic caries, conditions of and ways of prevention, contraindications for fluoridation.
23. Prophylaxis caries and its importance in the practice of centralized water supply.
24. The value toothpastes and powders for the prevention of caries in the population.
25. Endemic fluorosis, stages, ways of prevention
26. Subjective and objective indicators studying human nutritional status.
27. Primary (exogenous) disease of excessive or inadequate nutrition.
28. The secondary (endogenous) disease of excessive or insufficient nutrition
29. Alimentary multifactorial diseases. Diseases of alimentary tract. Diseases associated with metabolic disturbances.
30. Food additives used to improve the organoleptic properties (taste regulation, appearance improvement) of food products, the regulation of their content in foods, and the impact on human health.
31. Food additives used to regulate the consistency and shape the food texture, normalize their content and influence on human health.
32. Legislative and regulatory documents regulating the use of food additives in the food industry.
33. Physiological features of metabolism in children and adolescents of different ages and medical and biological requirements for their nutrition.
34. Features of the requirements for nutrition of people of mature and advanced age, their scientific justification.
35. Methods of assessing the actual nutrition of various socio-professional and age-and-sex groups of the population.
36. Methods of studying and assessing the nutritional status as an integrated medical control over the nutrition of organized collectives and individuals.

**3.4. Individual tasks** (the list approved at the meeting of the department with the determination of the number of points for their performance, which can be added as incentives): not envisaged

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

The master's appeal against the assessment (number of points) received in the differentiated test at KhNMU must be submitted in person no later than the next working day after the announcement of the assessment. The appeal is considered no later than the next day after its submission in the presence of the master.

Additional questioning of the master at consideration of appeals is not allowed. The procedure for filing and reviewing an appeal must be made public and notified to the master no later than 7 days before the exams.

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

**Demands of discipline.** In order to successfully complete the relevant course, it is necessary to regularly attend practical classes; to have theoretical preparation for practical classes according to the subject; not to be late and not to miss classes; perform all necessary tasks and work in each lesson; be able to work with a partner or in a

group; to address to teachers of a course on various questions on subjects of employment and to receive it when you need it.

Students can discuss different tasks, but their performance is strictly individual. It is not allowed to write off, use various software, tips, use a mobile phone, tablet or other electronic gadgets during classes for purposes other than the educational process. Students are not allowed to be late for practical classes.

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

### **Attending classes and behavior**

It is important for students to follow the rules of good behavior at the university. These rules are common to all, they also apply to all faculty and staff, and are not fundamentally different from the generally accepted norms.

During classes it is allowed:

- leaving the audience for a short time if necessary and with the permission of the teacher;
- drinking water;
- taking photos of presentation slides;
- taking an active participation in the class

Forbidden:

- eating (except for persons whose special medical condition requires another - in this case, medical confirmation is required);
- smoking, drinking alcohol and even low-alcohol beverages or drugs;
- use obscene language or use words that offend the honor and dignity of colleagues and faculty;
- gambling;
- damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);
- shouting, listening to loud music in classrooms and even in corridors during classes.

**Use of electronic gadgets.** The use of electronic gadgets is the main and powerful source of information for studying the course, adaptable to modern requirements and contributes to entering the modern European educational space. Gadgets provide constant feedback: "teacher-master", "master-master", "master-group of masters". However, it is not allowed to use gadgets during a survey, checking the level of knowledge and other types of control.

### **Policy for students with special needs.**

The organization of inclusive education in higher education institutions is carried out in accordance with the order of KhNMU № 203 from 22.06.2018 "On approval of the procedure for support (assistance) of persons with disabilities, the elderly, other low-mobility groups during their stay (indoors) KhNMU.

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

Students' participation in research and conferences on this topic is encouraged.

Kharkiv National Medical University provides education and work that is free from discrimination, sexual harassment, intimidation or exploitation. The University recognizes the importance of confidentiality. All persons responsible for the implementation of this policy (staff of deans' offices, faculties, institutes and the Center for Gender Education, members of the student government and ethics committee, vice-rector for research and teaching) are confidential about those who report or accuse of discrimination or sexual harassment (except when the law requires disclosure of information and / or when disclosure by the University is necessary to protect the safety of others).

KhNMU creates a space of equal opportunities free from discrimination of any national, racial or ethnic origin, sex, age, disability, religion, sexual orientation, gender, or marital status. All rights, privileges, programs and activities granted to students or staff of the University apply to all without exception, provided they are properly qualified. The anti-discrimination policy and the policy of counteracting sexual harassment of KhNMU are confirmed by the Code of Corporate Ethics and the Charter of KhNMU.

**Recommendations for successful passing of discipline.** The activity of applicants for higher education during practical classes, the implementation of the required minimum of educational work in accordance with the curriculum.

**Incentives and penalties.** Additional points for participation in scientific conferences, conducting scientific research, publishing articles and abstracts, performing additional tasks, etc.

## 5. ACADEMIC PROBITY

Scientific and pedagogical staff of the department adhere to the ethical principles of academic charity, namely, refer to sources of information in the case of the use of ideas, statements, information; comply with the rules of copyright law; provide reliable information about the results of their own educational (scientific, creative) activities.

Teachers of the Department of Hygiene and Ecology №1 do not violate academic charity (do not engage in academic plagiarism, fabrication, deception, bribery).

The Department of Hygiene and Ecology No 1 supports **zero tolerance** for plagiarism. Male and female students are expected to constantly raise their awareness of academic writing. The first lessons will provide information on what to consider plagiarism and how to properly conduct research and scientific research.

### *Occupational Health*

The first lesson of the course will explain the basic principles of labor protection by conducting appropriate training. It is expected that everyone should know where the nearest evacuation exit to the audience, where the fire extinguisher is, how to use it, and so on.

## 6. RECOMMENDED READING

### Basic literature

1. Hygiene and Ecology. Special Questions of Hygiene and Ecology : навч.-метод. посіб. [за заг. ред. Власика Л. І.] Чернівці : Медуніверситет, 2019. 201 с.
2. Hygiene and Ecology : підруч. [за ред. В.Г.Бардова ] Вінниця: Нова Книга, 2018. 685 с.
3. Hygiene and Preventive medicine (manual for the students of dentistry faculties). Nadvorniy M.M., Vorokhta Y., Nadvorna O.M., Lototska O.V. and other authors. Odessa Press-courier, 2011. –288 p.
4. Kozak D.V., Sopol O.N., Lototska O.V. General Hygiene and Ecology. Ternopil: TSMU, 2008. 248 p.
5. Hygiene and ecology / V.A.Korobchanskiy, M.V.Vorontsov, A.A.Musulbas. – Kontrast Publishing Enterprise, Kharkov, 2006. – 208 p.
6. Abstracts of lectures.

### Extra literature

7. Natural Hygiene Handbook / James M. Lennon; TrueNorth Health Center. 2021. 254 p.
8. Hygiene and Safety: The Hospitality Industry Handbook 2nd ed./ Gordan Davis L. Juta 2011. 287 p.
9. Handbook of Occupational Safety and Health 3rd ed./ Edited by S.Z.Mansdorf. Waley, 2019. 752 p.
10. Selected Lectures on Nutrition / Dyachenko A. Sumy: Sumy State University Publishing House. - Pt. IV-V: Nutrition in Diseases. 204 p.
11. Nutrition: Principles and Application in Health Promotion / Sutor, C. W. J. B. Lippincott Co. 468 p.

## 7. INFORMATION RESOURCES

1. <http://distance.knmu.edu.ua/course/view.php?id=417>
2. <http://distance.knmu.edu.ua/course/view.php?id=256>
3. <http://distance.knmu.edu.ua/course/view.php?id=850>
4. <http://nbuv.gov.ua> – site of the National Library of Ukraine named in honor of V.I.Vernadsky
5. <http://korolenko.kharkov.com> – site of Kharkiv State Scientific Library named in honor of V.G.Korolenko