

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
“Military Hygiene”

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 4th

Syllabus of the educational component

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

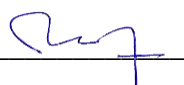
approved by Methodical Commission of KhNMU
on Problems of Public Health

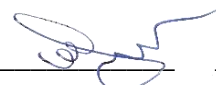
Record of proceedings dated
“27” August 2021 No. 1

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 “Military Hygiene” 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: Military hygiene as an academic discipline is based on knowledge of general hygiene, general military training, organization of medical support of troops; which lays the foundations of theoretical knowledge and practical skills on organizational, general and specific issues of military hygiene in peacetime and wartime emergencies, sanitary supervision and medical control to the extent necessary to perform functional duties in peacetime and wartime emergencies.

The discipline is the basis for the use of positive health factors of the environment to strengthen the health of servicemen, hardening the body; lays the foundations for students to study the environmental environment as a source of etiological risk factors for the occurrence and spread of disease, and on this basis develops measures for disease prevention.

The objectives of the discipline are to establish the theoretical foundations of military hygiene as a science and practice practical skills for the prevention of diseases of infectious and non-infectious origin in accordance with the current legislation of Ukraine; conducting preventive and current sanitary supervision over the accommodation, water supply, food, bath and laundry services and working conditions of servicemen; mastering laboratory research methods; use of favorable environmental health factors to strengthen the health of servicemen, harden the body, etc..

The subject of study of the discipline is study of the impact of environmental factors on military men, assessment of health risk factors and justification of measures aimed at disease prevention in wartime and during training in peacetime, ensuring optimal living conditions in stationary and field accommodation of military units, 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 in medical biology, biophysics, medical and bioorganic chemistry, basis of labour protection, physiology, pathology, internal medicine. and integrates with these disciplines.

Post-requisites. It lays the foundations for students to study of related disciplines during the next years of study, is the basis for preparation for the licensing exam EDKI, preparation for study in higher education institutions in the programs of the third educational and scientific level of higher education.

Link to the discipline page in Moodle system:

<http://distance.knmu.edu.ua/course/view.php?id=425>

1. AIM AND TASKS OF EDUCATIONAL DISCIPLINE

1.1. **The aim of study of educational discipline** “Military Hygiene” 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** “Military Hygiene” are laying the theoretical foundations of military hygiene, 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 among military men of infectious and non-infectious origin in accordance with current legislation of Ukraine; the studying the influence of environmental factors on health of soldiers and officers, 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, living conditions and activities in placers of troops’ accomodation, 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 – 1	Direction of training <u>22 Health Care</u>	normative	
Total number of hours - 30	Speciality: <u>222 Medicine</u>	Year of training:	
		4 th	-
		Semester	
		7 th /8 th	
		Lectures	
		5 h.	
		Practical, seminar	
		10 h.	
Hours for daily form of studies: auditorium – 15 independent work of student - 15	Educational-qualifying degree: « <u>Master</u> » in speciality « Medicine »	Laboratory	
		-	
		Independent work	
		15 h.	
		Individual task:	
		-	
		Kind of control: credit	

2.1. Lectures

№	Name of theme	Number of hours	Type of lecture
1	Place and significance of military hygiene for the medical knowledge and doctor's practical activity. Basic principles of organization and sanitary supervision of field location of army units and affected population during wartime.	2	On-line lecture in synchronous format
2	Organization and carrying out water and food supply of army during wartime.	2	On-line lecture in synchronous format
3	Occupational hygiene of military personnel.	2	On-line lecture in synchronous format

2.2. **Seminars** not used

2.3. **Practical classes**

№	Name of topic	Number of hours	Methods of teaching	Forms of control
1	Main sanitary and hygienic requirements of field location of army units and affected population during wartime.	2	explanation, discussion, illustration, presentation, videos, situational tasks	oral examination (individual and frontal); written response
2	Organization and carrying out sanitary inspection of water supply sources during wartime.	2	explanation, discussion, illustration, presentation, videos, discourse, situational tasks	oral examination (individual and frontal); written response
3	Organization and carrying out sanitary expertize of water quality during wartime. Water purification, disinfection and deactivation.	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse	oral examination (individual and frontal); written response
4	Medical control of adequacy of nutrition. Organization and carrying out sanitary expertize of food quality during wartime.	2	demonstration, discourse, situational tasks	oral examination (individual and frontal); written response
5	Organization and carrying out of sanitary inspection of labour conditions of military men. Pass-fail examination	2	explanation, discussion, illustration, demonstration, presentation, videos, discourse	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	Organization and carrying out sanitary supervision of bath and laundry services for army units, and for affected population	2	supervision, consultation	creative tasks; individual tasks;

				presentations, essays
2.	Hygienic and sanitary measures concerning the sewage and waste collection and neutralization during wartime	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
3	Organization of feeding in different kinds of troops. Rations, food allowances, universal field rations, minimal rations, rations for survival	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
4	Regulations for burial procedure during wartime. Requirements to arrangement of common graves. Peculiarities of burial procedure during epidemics	2	supervision, consultation	creative tasks; individual tasks; presentations, essays
5	Personal protective equipment for military men in different kinds of troops. Psychological support of military men in terms of hostilities and in period of recovery.	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 120 to 200. 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 in given table.

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
5	200	4.22-4,23	169	3.45-3,46	138
4.97-4,99	199	4.19-4,21	168	3.42-3,44	137
4.95-4,96	198	4.17-4,18	167	3.4-3,41	136
4.92-4,94	197	4.14-4,16	166	3.37-3,39	135
4.9-4,91	196	4.12-4,13	165	3.35-3,36	134
4.87-4,89	195	4.09-4,11	164	3.32-3,34	133
4.85-4,86	194	4.07-4,08	163	3.3-3,31	132
4.82-4,84	193	4.04-4,06	162	3.27-3,29	131
4.8-4,81	192	4.02-4,03	161	3.25-3,26	130
4.77-4,79	191	3.99-4,01	160	3.22-3,24	129
4.75-4,76	190	3.97-3,98	159	3.2-3,21	128
4.72-4,74	189	3.94-3,96	158	3.17-3,19	127
4.7-4,71	188	3.92-3,93	157	3.15-3,16	126
4.67-4,69	187	3.89-3,91	156	3.12-3,14	125
4.65-4,66	186	3.87-3,88	155	3.1-3,11	124
4.62-4,64	185	3.84-3,86	154	3.07-3,09	123
4.6-4,61	184	3.82-3,83	153	3.05-3,06	122
4.57-4,59	183	3.79-3,81	152	3.02-3,04	121
4.54-4,56	182	3.77-3,78	151	3-3,01	120
4.52-4,53	181	3.74-3,76	150	Less than 3	insufficiently
4.5-4,51	180	3.72-3,73	149		
4.47-4,49	179	3.7-3,71	148		
4.45-4,46	178	3.67-3,69	147		
4.42-4,44	177	3.65-3,66	146		

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

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 differential credit and exam

1. Conception and main tasks of hygiene. The main kinds of prophylaxis.
2. The role of hygiene in preservation and improvement of health and prophylaxis of diseases.
3. Classification of hygienic methods and the facilities of the research of the environment and its influence on organism and health.
4. The concept "Human environment" and its significance for health. The influence of factors of the external environment.
5. Hygienic characteristic of solar radiation. Diseases connected with insufficiency and surplus of ultraviolet radiation and their prophylaxis.
6. Physical characteristics, spectral distribution and biological effect of ultraviolet radiation. The methods of measuring of ultraviolet radiation
7. Definition of «microclimate» and factors, which influence its formation.
8. The mechanism of thermoregulation in the human organism and ways of heat transfer.
9. Kinds of the microclimate and factors of its formation. Influence of the microclimate on the human organism.
10. Physical characteristics and hygienic significance of natural lighting. Influence of the external and internal factors on level of natural lighting of the premises.
11. Main harmful effects of insufficient and excessive lighting on human health and work capacity. Hygienic requirements and significance of natural lighting.
12. Hygienic requirements and significance of artificial illumination in different premises. Types of artificial illumination.
13. Factors and indicators of the air pollution for indoor residence and manufacture areas.

14. Sources and indicators of communal, domestic, public and industrial air pollution, their hygienic regulations.
15. Noise as element of residential and industrial environment: its physical characteristic, sources and influence of noise on the human body. Prophylaxis of unfavorable influence of noise and vibration and their influence on organism and health.
16. Vibration: its physical characteristic, sources and classification. Unfavorable action of vibration on the human body and its prophylaxis.
17. Water as a health factor. Physiological, epidemiological and hygienic significance of water.
18. Classification of water supply sources and their hygienic characteristics. Influence of water on human morbidity.
19. Basic hygienic demands to drinking water quality and hygienic importance of its indices.
20. Sources of water pollution. The methods of improvement of drinking water quality.
21. The notion and methods of disinfection of drinking water and their hygienic characteristic.
22. Characteristics of water supply systems.
23. Main indices of water organic pollution and its hygienic signs.
24. Principles of determination of origin and remoteness of water organic pollution.
25. Hygienic, epidemic and endemic importance of soil.
26. Biological essence of nutrition. Classification of food nutrients and food products.
27. Types of nutrition, their hygienic character
28. Physiological and hygienic requirements to rational nutrition.
29. Definition of the alimentary status, its classification. Prevention of alimentary diseases.
30. Rational nutrition. Hygienic requirements to chemical composition and caloric content of the ration for different groups of population.
31. Proteins in nutrition, their physiological functions and daily need.
32. Fats in nutrition, their physiological functions and daily need.
33. Carbohydrates in nutrition, their physiological functions and daily need.
34. Classification and physiological significance of the vitamins in the organism.
35. Definition of "food poisoning" and their classification.
36. The main features of food poisoning and their prophylaxis.
37. Microbial food poisonings: sanitary-hygienic characteristic and prophylaxis.
38. Non-microbial food poisonings: sanitary-hygienic characteristic and prophylaxis.
39. Changes of physiological processes during work. Hygienic requirements to a rational regimen of labor and rest.
40. Classification and characteristics of occupational hazards.
41. Industrial dust, its classification and sources. Dust pathology and its prophylaxis.
42. Occupational diseases, caused by physical factors of environment and their prophylaxis.
43. Urban environment as the most important element of human ecology. Common problems of resident areas.
44. Hygienic principles of urban planning. Functional organization of the city territory.
45. Physical development of children and teenagers: methods of studying.

46. Main criteria and indices of the children and adolescents health. Groups of health.
47. Methods of estimation of physical development of children and teenagers.
48. Hygienic requirements to location, territory and internal design of a secondary school.
49. The main peculiarities of educational process at school.
50. Regimen of a day for children and teenagers. Principles of a day regimen construction.
51. Psychohygiene as a science, it's main objective, methods and means.
52. Concept of person health and main criteria of its assessment. Boundary neuropsychic and mental disorders and abnormalities as a hygienic problem.
53. Biological rhythms and human health. The biological rhythms concept. Initial conditions and development reasons of medical biorhythmology as a science.
54. Biorhythmological principles of the rational organization of the everyday activity. Chronohygiene as a basis of the desynchronosis prevention.
55. Hygienic requirements to the placement of medical establishments on the territory of city.
56. Hygienic characteristic of the various systems of planning of hospitals.
57. The main principle of the planning of a ward section.
58. Peculiarities of internal design and hygienic regimen in admission department.
59. Peculiarities of internal design and hygienic regimen in surgical department.
60. Peculiarities of internal design and hygienic regimen in infectious department.
61. Peculiarities of internal design and hygienic regimen in maternity department.
62. Peculiarities of internal design and hygienic regimen in gynecological department
63. Hygienic requirements to the ward of a hospital.
64. Hygienic requirements to the microclimate in a hospital.
65. Hygienic requirements to natural and artificial lighting in hospital wards and other medical rooms.
66. Hygienic character of medical protective regimen in a hospital.
67. Prophylaxis of hospital infections.
68. Hygienic characteristic of doctors' labor. Prophylaxis of negative influence of unfavorable conditions and work factors on the doctors' organism.
69. Peculiarities of surgeon work.
70. Ionizing radiation as occupational hazard for personnel of hospitals.
71. The basic principles of a radioactive protection of the personnel of medical establishments.
72. Requirements to allocation, planning, sanitary and technical equipment of X-ray room.
73. Peculiarities of water quality analyses and standards of drinking water quality during emergency situations.
74. Essence and main stages of sanitary survey of water supply sources in emergency situations.
75. Characteristic of sanitary-topographic survey of water supply sources.
76. Characteristic of sanitary-technical survey of water supply sources.
77. Types of water treatment in field conditions, their characteristics.
78. Main kinds of water disinfection in field conditions.

79. Methods and basic means of water purification and decontamination in field conditions.
80. Duties of medical staff, methods and instruments of sanitary control of the adequacy and safety of food in field conditions during emergencies.
81. Hygienic characteristics of climate and weather of hot and tropical altitudes.
82. Personal hygiene in hot and tropical climate (hygiene of skin, clothes; regimen of day).
83. Peculiarities of planning and building populated areas in hot and tropical climate.
84. Hygiene of dwelling in hot climate. Specific character of building materials which are used in hot and tropical countries.
85. Physiological functions of water and their peculiarities in tropic conditions.
86. Epidemic and endemic waterborne diseases of arid and humid tropic regions.
87. Human body dehydration in tropical climate, its signs and symptoms.
88. Hygienic requirements to water quality and their peculiarities in tropical conditions.
89. Hygienic characteristic of water supply sources in arid and humid tropical areas.
90. Hygienic characteristic of methods and means of purification, disinfection, special water conditioning methods in tropical conditions.
91. Physiological and hygienic basics of rational nutrition in tropical conditions.
92. The importance of main nutrients in nutrition of tropical regions population.
93. Hygienic characteristics of food products, used in arid and humid tropical regions.
94. General characteristic of alimentary diseases of tropical regions population.
95. Malnutrition and complete starvation diseases, vitamin deficiency diseases among tropical regions population.

3.3. Control questions for independent work

1. Factors of environment and social conditions of life which influence the children and adolescent health formation.
2. General patterns of the child and adolescent organism growth and development. Assessment criteria and indices of the children's and adolescents' health.
3. Method of complex assessment of the children's and adolescents' health. Peculiarities of allocation of children and adolescents by health groups.
4. Physical development as a main criterion of assessment of health. Main incidences of physical development.
5. Rules of anthropometry. Requirements to tables of regional standards of physical development.
6. Biological and chronological age. Indices of the biological development level of children and adolescents. Modern concepts of epochal and interage acceleration and deceleration (retardation).
7. Methods of assessment of the children's and adolescents' physical development (method of signal deviations, assessment by regression scales, complex and centile methods).

8. Methods of assessment of health state and physical development in organized children collectives.
9. Tasks of doctor concerning organization and carrying out of sanitary measures in children collectives (schools, gymnasiums, lyceums, colleges, hostels, vocational schools, children's homes, infant schools, labour and rest camps, extracurricular (out-of-school) establishments). Systems of the children's and adolescents' health management.
10. Morphogenetic readiness of children to school.
11. Methods of study physiological age characteristics of the children.
12. Methods of hygienic assessment of the operational readiness of the child to join the school.
13. Method of workload estimation (dynamic curve of work activity of students during the lesson, day, week).
14. Method of mass and individual timing of the child.
15. Method of assess the physical and mental capacity of students.
16. Hygienic requirements for recreation, extracurricular activities and homework.
17. Biological rhythms and human health. The biological rhythms concept. Initial conditions and development reasons of medical biorhythmology as a science.
18. Main characteristics of the biological rhythms (level, period, amplitude, acrophase, form of daily curve etc.).
19. Classifications of the most widespread biological rhythms.
20. Methods of determination of different types of biological rhythms day curves.
21. Methods of determination of human day working ability type.
22. Methods of determination of calculation biological rhythms.
23. Conception of desynchronosis as a main type of chronopathology and its medical and hygienic category. Types of desynchronosis.
24. General and production factors that affect the incidence of workers in enterprises.
25. Methods of studying the incidence of workers (medical examinations and examinations, epidemiological, clinical, sanitary and statistical methods).
26. Bases of an estimation of etiological factors and risk factors, forecasting of pathological processes.
27. Occupational morbidity. Classification of occupational diseases.
28. Preventive measures to reduce the incidence of workers in manufacturing enterprises.
29. Location and structure of the boxed section of the infectious department.
30. Hygienic requirements for planning, capacity and area boxes, half boxes, boxed chambers.

31. Location and structure of the ward section of the somatic office for children of all ages, the number of beds and chambers in it.
32. Location and structure of the obstetric department, number of beds in separate units.
33. Methods of placement of newborns in the obstetric department, their comparative hygienic assessment.
34. Medical indications for referring women to the obstetric department, department of pathology of pregnancy, physiological department.
35. Types of operational units, their structure.
36. Concept about septic and aseptic surgical operations, their topographical location. Zoning of the operational unit, a set of premises included in each zone.
37. Hygienic requirements for hospital admission departments, a set of premises.
38. Hygienic requirements for outpatient departments, structure, office area.
39. Planning features of adults and children's polyclinics.
40. Radiation safety of the population as a topical hygienic problem in modern conditions.
41. Hygienic characteristics of the climate and the weather of hot and tropical latitudes.
42. Hygiene of home in a hot climate. Features of the layout of buildings for different purposes from the point of view of their insolation, influence on microclimate conditions of premises. Optimal orientation of the windows of premises, their scientific justification. Sun protection devices.
43. Hygienic requirements for natural and artificial ventilation of residential, public, industrial premises in a tropical climate.
44. Air conditioning in residential, public, industrial premises as one of the means of optimizing their microclimate.
45. Features of requirements for natural lighting of premises in tropical regions. The relationship between the natural lighting of rooms and activities to optimize the microclimate in them. The effect of blinds on these factors.
46. Hygienic characteristics of building materials and structures used for construction in tropical latitudes.
47. Harmful and dangerous factors of tropical wildlife, principles of protection from them.
48. Soil, its definition. Hygienic, epidemic and endemic importance of soil in hot climate.
49. Procedure of detecting eggs of geohelminthes in soil of tropical and hot climate.
50. Criteria of soil sanitary condition in tropical and hot climate, their classification and hygienic importance.

51. The functional disorders of health in the organism and diseases in tropic and desert climate conditions, their prevention.

52. Peculiarities of inhabited area planning and build-up, building materials and constructions which are used for building in tropic climate.

53. Peculiarities of sanitary infrastructure of settlements in tropic climate. Water supply, sewerage system, solid waste disposal. The role of green vegetations in microclimate conditions improvement in inhabited areas.

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 ecology / V.A.Korobchanskiy, M.V.Vorontsov, A.A.Musulbas. – Kontrast Publishing Enterprise, Kharkov, 2006. – 208 p.
4. Abstracts of lectures.

Extra literature

5. Natural Hygiene Handbook / James M. Lennon; TrueNorth Health Center. 2021. 254 p.
6. Handbook of Occupational Safety and Health 3rd ed./ Edited by S.Z.Mansdorf. Waley, 2019. 752 p.
7. Natural Hygiene Handbook / James M. Lennon; TrueNorth Health Center. 2021. 254 p.
8. Bull FC, Al-Ansari SS, Biddle S, Borodulin K, Buman MP, Cardon G, et al. World Health Organization 2020 guidelines on physical activity and sedentary behaviour. Br J Sports Med. 2020;54(24):1451–62. <https://doi.org/10.1136/bjsports-2020-102955>

7. INFORMATION RESOURCES

1. <http://distance.knmu.edu.ua/course/view.php?id=2728>
2. <http://distance.knmu.edu.ua/course/view.php?id=2757>
3. <http://distance.knmu.edu.ua/course/view.php?id=3127>
4. <http://distance.knmu.edu.ua/course/view.php?id=425>
5. <http://distance.knmu.edu.ua/course/view.php?id=3186>
6. <http://nbuv.gov.ua> – site of the National Library of Ukraine named in honor of V.I.Vernadsky
7. <http://korolenko.kharkov.com> – site of Kharkiv State Scientific Library named in honor of V.G.Korolenko