

MINISTRY OF HEALTH
KHARKIV NATIONAL MEDICAL UNIVERSITY

Department of Hygiene and Ecology № 2

Academic year 2021-2022

SYLLABUS OF THE EDUCATIONAL COMPONENT

«BASICS OF ECOLOGY AND PREVENTIVE MEDICINE»

(the name of the educational component)

Optional educational component

Form of education full-time

Branch of knowledge 22 «Health»

Specialty 223 «Nursing»

Education and professional program «Nursing»

The first (bachelor's) level of higher education

Course first

Syllabus of educational component reviewed at
the meeting of Department of Hygiene and
Ecology No. 2

Record dated
«31» August 2021 No. 7
Acting Head of Department



Ass.Prof. Sidorenko O.M.

Approved by KhNMU Methodical
Commission on Public Health Issues

Record dated
«27» August 2021 No. 1



Prof. Ognev V.A.

DEVELOPERS OF SYLABUS:

1. Zavgorodniy I.V., Doctor of Medical Sciences, Professor
2. Merkulova T. V., Candidate of Medical Sciences, Associate Professor, senior researcher
3. Korobchansky P.O., Candidate of Medical Sciences, Associate Professor,

INFORMATION ABOUT TEACHERS, THAT TEACH THE EDUCATIONAL COMPONENT

Name of the teacher	Position, academic rank, scientific degree	Professional interests	A link to the teacher's profile
Merkulova T. V.	Candidate of Medical Sciences, Associate Professor, senior researcher of department of hygiene and ecology No. 2	Hygiene and ecology	Moodle: http://31.128.79.157:8083/course/index.php?categoryid=31 Mob. phone: +38 (050) 738 58 08 tv.merkulova@knmu.edu.ua
Korobchansky P.O.	Candidate of Medical Sciences, Associate Professor of department of hygiene and ecology No. 2	Hygiene and ecology	Moodle: http://31.128.79.157:8083/course/index.php?categoryid=31 Mob. phone: +38 (099) 403 99 17 po.korobchanskyi@knmu.edu.ua

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Offline consultations: schedule and venue according to the schedule of the department.

Online consultations: schedule and venue by prior agreement with the teacher.

Location: classes are held in the conditions of the KhNMU department.

INTRODUCTION

Syllabus of the educational component «Basics of ecology and preventive medicine» compiled according to the educational and professional program, first (bachelor) level of higher education, branch of knowledge 22 «Healthcare», specialty 223 «Nursing».

Description of the educational component (abstract) at the turn of the second and third millennia of human existence, the state of the environment and its components is becoming more and more important for sustainable development, maintaining health, increasing the duration and quality of human life. Further development is possible only under the conditions of rationalization of nature use and effective mechanisms of nature protection in order to optimize the interaction of society and the environment. Thus, modern society is in the conditions of an ecological crisis, and increasing attention to environmental education is of great importance for its solution. The study of the discipline "Fundamentals of ecology and practical medicine" is aimed at forming students' assimilation of an understanding of the relationships of living beings with each other and with inorganic nature, their structure, functioning and connections in ecosystems, which allows students to form the basics of ecological thinking, that is, understanding the unity of man with nature, learn environmental literacy and culture. Students also receive basic knowledge on the prevention of disorders in the health of individuals and the population as a whole.

In the process of learning, students receive the necessary knowledge in lectures and practical classes, during which it is envisaged to create models that activate thinking, creative character, independence in decision-making, and the desire to acquire knowledge and skills. To make the most effective decisions, specialists must know and understand the mechanisms of interaction in the "society – environment – technosphere" system, have an idea of the legal and technological components of environmental problems. Students have the opportunity to discuss environmental issues, give an in-depth analysis of the situation under consideration, express their own opinion, ideas and perspectives on solving the problems.

All this determines the relevance of studying the component "Basics of ecology and preventive medicine".

The program is organized with the use of modern pedagogical principles of organizing the educational process of higher education.

The subject of study of the educational component is environmental factors, their impact on the health of the population and the population as a whole, methods and measures to reduce the negative impact of environmental factors on the health of the population and the population as a whole, forms and methods of effective management of safe activities in social and environmental spheres, in accordance with current legislative and other normative legal acts.

Interdisciplinary connections: The study component "Basics of ecology and preventive medicine" has connections with the previously studied disciplines: physics, chemistry, biology and overlaps with the disciplines "Occupational Safety" and "Social and Environmental Safety of Activity" and other basic disciplines that are simultaneously taught to students.

Prerequisites. Studying the component involves the prior acquisition of credits in theory and practice of fundamentals of ecology and practical medicine.

Post requisites. The main provisions of the academic discipline should be applied when studying professional disciplines.

THE PURPOSE AND TASK OF THE EDUCATIONAL DISCIPLINE

1.1. The purpose of teaching the educational component «Basics of ecology and preventive medicine» there is training compiled according to the educational and professional program, first (bachelor) level of higher education, branch of knowledge 22 «Healthcare», specialty 223 «Nursing». The ultimate goals are set on the basis of educational and professional program. On the basis of the final goals, specific goals are formulated for each section in the form of certain skills (actions), target tasks that ensure the achievement of the final goal of studying the discipline.

1.2. The main tasks of studying the educational component «Basics of ecology and preventive medicine» is laying the foundations:

- the use of favorable health factors of the environment to strengthen human health and harden the body;
- students' study of the environment as a source of etiological factors and etiological risk factors for the occurrence and spread of diseases;
- a healthy lifestyle, prevention of diseases, diagnosis and differential diagnosis of diseases based on the study of the influence of environmental factors on the body and health;
- to give a general idea of the causes, scales, possible tragic consequences and ways of overcoming the modern crisis in the relationship between human society and the surrounding natural environment, to familiarize them with the basics of a new comprehensive science of ecosystems and the harmonization of the interaction of society and nature.
- to promote the education of students in environmental consciousness, which is an integral part of national consciousness and consists in understanding the priority of an undamaged natural environment;
- in an economical, thrifty attitude not only to natural objects, but also to the products of human activity, in subordinating personal interests to universal ones.

1.3. Competencies and learning outcomes, the formation of which contributes to the component (interrelationship with the normative content of the training of higher education applicants, formulated in terms of learning outcomes in the Standard).

1.3.1. The study of the educational component ensures students' mastery of competencies:

integral: A bachelor of nursing is able to solve complex specialized tasks and practical problems in the field of nursing or in the learning process, which involves the application of certain theories and methods of the relevant science and is characterized by the complexity and uncertainty of conditions.

general:

GC 03. Ability to abstract thinking, analysis and synthesis.

GC 04. Ability to apply knowledge in practical situations.

GC 05. Knowledge and understanding of the subject area and understanding of professional activity.

professional:

PC 03. The ability to meet the needs of the patient/client throughout the lifetime (including the dying process) by planning, assisting and executing nursing interventions, evaluating and correcting individual care plans created in collaboration with the patient/client, caregivers, family members and other medical and social workers.

PC 05. The ability to effectively apply a combination of nursing skills (abilities), medical supplies, interventions and actions to ensure care based on a holistic approach, taking into account the satisfaction of the patient's needs for comfort, nutrition, personal hygiene and the ability of the individuals to meet their daily needs.

PC 08. Preventive activities of a nurse aimed at preserving and strengthening health, preventing diseases, informing, and educating the patient and his family members.

PC 11. The ability to execute the medical and social rehabilitation in order to restore the population health.

1.3.2. The study of the educational component ensures that students acquire the following program learning outcomes:

PLO 01. Conduct a nursing subjective and objective examination of various organs and systems of the patient and evaluate the obtained data. In the conditions of health care facilities and at home, by communicating with patients of different ages, their relatives or close friends, a sick child and his parents, be able to collect complaints, disease history, life history, allergic history, epidemiological history, evaluate anamnestic data.

PLO 02. Conduct nursing diagnosis: identify and assess patient problems. In the conditions of health care facilities, at home, predictable circumstances, to be able to identify the real problems of the patient, assess their priority and establish a nursing diagnosis.

PLO 08. To perform medical manipulations in order to ensure a sanitary and anti-epidemic regime.

PLO 09. Correctly perform medical manipulations in order to ensure the personal hygiene of the patient.

PLO 11. To coordinate activities using a combination of multiple skills to ensure patient nutrition.

PLO 12. Correctly perform medical manipulations in order to take measures to stabilize the functional state of the body.

PLO 17. To plan and execute a preventive and an anti-epidemic measures for infectious diseases.

PLO 18. To organize and conduct training of patients and their family members on medical issues.

1.3.3. Studying an educational component ensures that students acquire advanced **social skills (Soft skills):**

- communication skills (implemented through: the method of working in pairs and groups, brainstorming, the method of self-presentation),
- teamwork (implemented through: project method, openwork tiles),
- conflict management (implemented through: dramatization method, game methods),
- time management (implemented through: project method, work in groups, trainings),
- leadership skills (implemented through: group work, project method, self-presentation method),
- sports development and effective recreation (implemented through: various types and forms of motor activity for active recreation and leading a healthy lifestyle),
- empathy (implemented through: respectful attitude to the opinion and ethical considerations, appearance and behavior of other people),
- stress resistance (realized through: working in a group with representatives of other professional groups of different levels and ages in unforeseen circumstances and situations).

2. INFORMATION VOLUME OF THE EDUCATIONAL COMPONENT

Name of indicators	Branch of knowledge, specialty, educational degree, EPP	Characteristics of the educational component
		full-time education
Number of credits – 3	Branch of knowledge <u>22 "Health"</u> (code and name)	Optional
Total hours – 90	Specialty: <u>223 «Nursing»</u> (code and name)	Year of preparation:
		1-st
		Semester
		2-nd
		Lectures
Hours for full-time education: auditorium – 32, independent work of the student – 58	Educational degree: First (bachelor) level of higher education	16 hours
		Practical, seminar
		16 hours
		Laboratory
		-
		Independent work
	EPP: «Nursing»	58 hours

		Individual tasks: -
		Control type: credit

2.1 Description of the component

2.2.1 Lectures

№	Topic name	Number of hours
1	Ecology as a science. Definition, subject, tasks of ecology. Theoretical and applied directions. Current state, structure of ecology. The interdisciplinary nature of ecology, its connections with other sciences.	2
2	The biosphere is the global ecosystem of the Earth. Global environmental problems. Technosphere as a whole system.	2
3	Environmental pollution.	2
4	Air pollution and its consequences.	2
5	Anthropogenic influence on soils and its consequences.	2
6	Anthropogenic influence on the hydrosphere and its consequences.	2
7	Basic aspects of environmental protection. Strategy for solving environmental problems.	2
8	Hygienic assessment of the potential risk of the influence of environmental factors on the human body and public health.	2
	Total hours	16

2.2.2 Seminar classes are not provided in the curriculum

2.2.3 Practical classes

№	Topic name	Number of hours	Teaching methods	Forms of control
1	Ecology as a science. Definition, subject, tasks of ecology. Theoretical and applied directions.	2	Story-explanation, conversation, illustration, presentation	oral examination; written survey; test control
2	Hygienic assessment of the potential risk of the influence of environmental factors on the human body and public health.	2	Story-explanation, conversation, illustration, presentation	oral examination; written survey; test control
3	Hygienic assessment of the impact of natural and anthropogenic components of the biosphere on human and population health.	2	Story-explanation, conversation, illustration, presentation	oral examination; written survey; test control
4	Anthropogenic impact on the biosphere.	2	Story-explanation, conversation, illustration, presentation	oral examination; written survey; test control
5	Environmental pollution.	2	Story-explanation, conversation, illustration, presentation	oral examination; written survey; test control

6	Air pollution and its consequences.	2	Story-explanation, conversation, illustration, presentation	oral examination; written survey; test control
7	Anthropogenic influence on soils and its consequences.	2	Story-explanation, conversation, illustration, presentation	oral examination; written survey; test control
8	Anthropogenic influence on the hydrosphere and its consequences.	2	Story-explanation, conversation, illustration, presentation	oral examination; written survey; test control
Total hours of practical classes:		16		

2.2.4. Laboratory classes are not provided for in the curriculum

2.2.5. Independent work

№	Topic name	Number of hours	Teaching methods	Forms of control
1	The history of the development of ecology as a science. Formation and development of ecology as a science.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
2	Organization and functioning of ecological systems.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
3	The main living environments and adaptations of organisms to them: aquatic environment; soil as a habitat; ground-air environment.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving	oral examination; written survey; test control

			situational tasks	
4	Current state, structure of ecology. The interdisciplinary nature of ecology, its connections with other sciences.	4	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
5	The main living environments and adaptations of organisms to them: aquatic environment; soil as a habitat; ground-air environment.	4	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
6	The role of V.I. Vernadskyi in the study of the biosphere. Composition and functioning of the biosphere, global processes in the biosphere.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
7	Environmental factors and their influence on the existence and development of organisms.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
8	Anthropogenic impact on the biosphere.	2	Studying the material of textbooks, regulatory and legal acts of current	oral examination; written survey; test control

			sanitary legislation, solving situational tasks	
9	Ecological Management and Marketing	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
10	Environmental safety and ecological risks	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
11	Basic aspects of environmental protection. Strategy for solving environmental problems.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
12	Environmental management and marketing. Environmental safety and environmental risks	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
13	World environmental policy. International integration in the field of ecology.	2	Studying the material of textbooks,	oral examination; written survey; test control

			regulatory and legal acts of current sanitary legislation, solving situational tasks	
14	The hygienic value of solar radiation and the use of its components for the prevention of human diseases and sanitation of air, water and objects.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
15	Water hygiene and water supply of settlements. Sanitary protection of water bodies. Sanitary soil protection and cleaning of populated areas.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
16	Sanitary protection of atmospheric air. Hygiene planning of settlements. Hygiene of residential and public buildings and structures.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
17	Hygienic significance of physical factors in the conditions of populated areas.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control

18	Modern problems of nosocomial infection and a set of hygienic measures for its prevention. Specific and non-specific prevention. Anti-epidemic regime of health care institutions in pandemic conditions.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
19	Hygienic assessment of conditions of stay of patients and characteristics of working conditions of personnel in medical and preventive institutions. Peculiarities of the stay of patients and the performance of professional duties of medical workers in the conditions of a pandemic.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
20	Nutrition in preventive medicine. Organization of meals in health care institutions in compliance with the sanitary and anti-epidemic regime. Peculiarities of nutrition of workers at industrial enterprises.	4	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
21	Food poisoning as a hygienic problem. Methods of investigating cases of food poisoning.	4	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
22	Hygienic approaches to the causes and development of occupational and occupationally related morbidity.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation,	oral examination; written survey; test control

			solving situational tasks	
23	Hygienic evaluation of the factors of the labor process and production environment.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
24	Physical development as an important criterion for assessing the health of children and adolescents.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
25	Environmentally dependent diseases of children and adolescents.	2	Studying the material of textbooks, regulatory and legal acts of current sanitary legislation, solving situational tasks	oral examination; written survey; test control
Total hours of independent work:		58		

Teaching methods:

- - Verbal (lecture, conversation);
- - Visual (illustration, presentation material, video material);
- - Practical (independent work, work in pairs, work in groups).

Control methods:

1. Oral control of learning theoretical material (survey, discussion).
2. Written control (answers to questions, problem solving, test control).
3. Control of practical abilities and skills (solving situational problems, resolving problematic situations, providing practical recommendations).

Current and final semester control is used when studying the discipline. Also, there is a mandatory control of mastering the learning material of the discipline assigned to independent work.

Current control (mastery of individual topics): conducted in the form of an oral survey, testing, student conversations on predetermined issues, in the form of speeches by students of higher education with reports when discussing educational issues in practical classes.

In order to evaluate the independent work of students, an alternative option is offered (by choice): traditional types of tasks: writing a test paper, an essay, or creative types: preparing a multimedia presentation, studying educational literature (writing an abstract, reviewing, citing, theses of primary sources).

The final control of the discipline is a mandatory form of control of educational achievements of students of higher education. It is performed orally. The deadlines for conducting the final semester control are established by the schedule of the educational process, and the amount of educational material submitted for the final semester control is determined by the program of the academic discipline.

The total number of rating points for the study of the discipline per semester is calculated as the sum of the points obtained from the results of the current control and the points obtained from the results of the final semester control. The maximum number of points per semester is 200 points, the minimum is 120 points.

Evaluation of the success of students' studies according to the ESTS of the organization of the educational process (PND, credit, differential credit, exam) is carried out on the basis of the "Instructions for evaluating the educational activity of applicants for higher education at the Kharkiv National Medical University", approved by the order of KhNMU dated 21.08.2021 No. 181. The form of the final control of the success of training in the discipline is the assessment.

3. ASSESSMENT CRITERIA

3.1 The evaluation of the educational success of students is carried out on the basis of the current "Instructions for evaluating the educational activity of students of higher education at the Kharkiv National Medical University", approved by the order of the KhNMU dated August 21, 2021 No. 181.

Students' knowledge is evaluated in all types of educational activities according to the following criteria:

- 1) "**Excellent**" – corresponds to a high (creative) level of competence:
 - The student shows special creative abilities, is able to acquire knowledge independently, without the help of the teacher finds and processes the necessary information, is able to use the acquired knowledge and skills for decision-making in unusual situations, convincingly argues answers, independently reveals own talents and inclinations;
- 2) "**Good**" – the student receives two levels of assessment depending on the number of points scored and corresponds to a sufficient (constructive-variable) level of competence:
 - The student is fluent in the studied amount of material, applies it in practice, freely solves exercises and problems in standard situations, independently corrects mistakes, the number of which is insignificant;
 - The student is able to compare, summarize, systematize information under the guidance of the teacher; as a whole to apply it independently in practice; control their own activities; to correct mistakes, among which there are significant ones, to choose arguments to confirm opinions;
- 3) "**Satisfactory**" – the student receives two levels of assessment depending on the number of points scored and corresponds to the average (reproductive) level of competence:
 - The student reproduces a significant part of the theoretical material, shows knowledge and understanding of the basic principles; with the help of the teacher can analyze the educational material, correct mistakes, among which there are a significant number of significant;
 - The student has the study material at a level higher than the initial, a significant part of it is reproduced at the reproductive level.
- 4) "**Unsatisfactory**" – corresponds to a low (receptive-productive) level of competence:
 - The student has not mastered the material of the discipline, does not know the scientific facts, definitions, almost does not navigate in the original sources and recommended literature, there is no scientific thinking, practical skills are not formed.

The total number of rating points for the study of the discipline for the semester is calculated as the sum of points obtained by the results of the current control and points obtained by the results of the final semester control. The maximum number of points for the semester is 200 points, the minimum - 120 points. Evaluation of students is carried out in accordance with the "Instructions for evaluation of educational activities of students of higher education at the Kharkiv National Medical University", approved by order of KhNMU dated 21.08.2021 No. 181.

Current educational activities of students supervised by the teacher of the academic group, after the students have mastered each topic of the discipline, grades are given using the 4-point (national) system. At the end of the semester, the average grade (to the nearest hundredth) for the CEA is automatically obtained by the teacher using the electronic journal of the ASU system.

For the discipline, the study of which is completed in the current semester and the form of its control is differential assessment, the average score for the CEA is converted by the teacher of the department into a 200-point scale.

Incentives and penalties. A student can receive additional points 1-10 for participating in research student conferences, scientific research, and surveys. The assessment of the individual tasks of the applicant is carried out by the teacher's tasks:

- presentation of an essay at a practical session 0 – 2 points;
- a report with a presentation at a practical session 0 – 3 points,
- presentation at scientific and practical conferences of the department, university, writing theses, and reports 0 - 5 points;
- participation in a scientific and practical conference – 5 – 10 points

Liquidation of academic debt is carried out by independent processing of theoretical material, followed by an oral survey, testing and discussion of the topic of the missed lesson with the teacher. In the case of a sufficient level of knowledge on the relevant subject, the academic debt is considered liquidated. Free practice is carried out within 30 days from the moment of the missed class (without permission from the dean's office), if the period from the moment of the missed class exceeds 30 days, the practice is carried out only in the case of granting permission for the liquidation of academic debt from the dean's office, taking into account the presence of a discipline in the list of disciplines, practice of missed classes of which are conducted on a paid basis.

Assessment of current educational activities.

For the component, the study of which is completed in the current semester and the form of its control is a test, the average score of current educational activity of student's teacher of the department is translated into a 200-point scale.

Table 1

Recounting of an average mark for current activity in multi-point scale (for disciplines, which are finished with a credit)

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	200	4.22-4,23	169	3.45-3,46	138
4.97-4,99	199	4.19-4,21	168	3.42-3,44	137
4.95-4,96	198	4.17-4,18	167	3.4-3,41	136
4.92-4,94	197	4.14-4,16	166	3.37-3,39	135
4.9-4,91	196	4.12-4,13	165	3.35-3,36	134
4.87-4,89	195	4.09-4,11	164	3.32-3,34	133
4.85-4,86	194	4.07-4,08	163	3.3-3,31	132
4.82-4,84	193	4.04-4,06	162	3.27-3,29	131
4.8-4,81	192	4.02-4,03	161	3.25-3,26	130
4.77-4,79	191	3.99-4,01	160	3.22-3,24	129
4.75-4,76	190	3.97-3,98	159	3.2-3,21	128
4.72-4,74	189	3.94-3,96	158	3.17-3,19	127
4.7-4,71	188	3.92-3,93	157	3.15-3,16	126
4.67-4,69	187	3.89-3,91	156	3.12-3,14	125

4.65-4,66	186	3.87-3,88	155	3.1-3,11	124
4.62-4,64	185	3.84-3,86	154	3.07-3,09	123
4.6-4,61	184	3.82-3,83	153	3.05-3,06	122
4.57-4,59	183	3.79-3,81	152	3.02-3,04	121
4.54-4,56	182	3.77-3,78	151	3-3,01	120
4.52-4,53	181	3.74-3,76	150	Under 3	Not enough
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		

3.2.-3.3. Control questions. Questions for credit.

1. The history of the development of ecology as a science.
2. Formation and development of ecology as a science.
3. Ecology as a science.
4. Definition, subject, tasks of ecology. Theoretical and applied directions.
5. Current state, structure of ecology.
6. The interdisciplinary nature of ecology, its connections with other sciences.
7. Organization and functioning of ecological systems.
8. The main living environments and adaptations of organisms to them: aquatic environment.
9. Basic living environments and adaptations of organisms to them: soil as a habitat.
10. Basic life environments and adaptations of organisms to them: terrestrial and aerial environment.
11. The biosphere is the global ecosystem of the Earth. Global environmental problems.
12. Structural and functional properties of the biosphere.
13. The role of V.I. Vernadskyi in the study of the biosphere.
14. Population as a biological system.
15. Ecology of groups and ecosystems.
16. Environmental factors and their influence on the existence and development of organisms.
17. Anthropogenic influence on the biosphere.
18. The technosphere as a whole system.
19. Environmental pollution.
20. Atmospheric pollution and its consequences.
21. Anthropogenic impact on soils and its consequences.
22. Anthropogenic impact on the hydrosphere and its consequences.
23. Main aspects of environmental protection. Strategy for solving environmental problems.
24. Ecological monitoring of the environment. Environmental quality control in Ukraine
25. Environmental management and marketing
26. Environmental safety and environmental risks
27. World environmental policy. International integration in the field of ecology
28. Comparative hygienic characteristics of water supply sources.
29. In what order is it recommended to choose water supply sources? Why? What documents are used to assess the quality of drinking water?
30. Water supply systems. Selection of water source for centralized water supply. Documents.
31. Systems of hospital construction. Pros and cons.

32. Measures for the protection of atmospheric air. Sanitary and technical measures: types of structures for dust collection.
33. Sources of atmospheric air pollution. Pollution prevention measures.
34. Sources of soil pollution.
35. What is thermoregulation? Types of heat transfer. Hygienic regulation of microclimate parameters.
36. Groups of children's health. Describe the 2nd group.
37. Criteria for assessing the state of health of children and adolescents. What factors influence the formation of children's health?
38. Types of food. Rational nutrition, principles.
39. Functions of food, which nutrients provide them.
40. Etiology of food poisoning. Differences between food poisoning and infectious diseases.

3.4. Individual tasks

Individual work of students under the guidance of a teacher from the educational component «Basics of ecology and preventive medicine» is carried out during the semester in the form of: studying literary sources recommended for mastering topics and problems and preparing reports with presentations based on them; study of regulatory documents recommended for studying various topics of the discipline; working with health databases; performance of individual tasks.

Correspondence students must complete an individual assignment and send it to the teacher for review (by e-mail) no later than 10 days before the beginning of the academic session.

Tasks (topics) for individual work are chosen by the students themselves and coordinated with the teachers.

Evaluation criteria of an individual task. The work must have a volume of 10-16 pages of text of standard design (sheet size A4, font - Times New Roman, point - 14, line spacing - 1.5, paragraph indent - 1.25, width alignment, paragraph indents - no) and fully disclose the content of the selected issues. The presentation of the report should be done in software services such as PowerPoint, Prezi, Google slides, etc. The work must be structured and contain the title of the report, relevance, purpose, tasks, the main content of the work, the list of used literary sources, designed in accordance with the existing requirements of DSTU 8302:2015 "Information and documentation.

Bibliographic link https://kubg.edu.ua/images/stories/podii/2017/06_21_posylannia/dstu_8302.pdf.

The work must be submitted for review within the specified time.

Inconsistency in content, too large or small volume of work, non-compliance with formal requirements for design, lack of a list of used sources or its incorrect design, insufficient structuring of work, untimely submission of work for review are grounds for lowering the grade or returning the work for revision.

3.5. Other encouragements

For participation in research student conferences, in scientific research, in surveys, a student can receive additional points 1 - 10.

3.6. Rules for challenging the assessment

The disciplinary assessment can be appealed based on the requirements of the "Regulations on the Organization of the Educational Process at the KhNMU" No. 370 of August 27, 2019, as amended by Order No. 114 of May 20, 2020.

4. DISCIPLINARY POLICY

To successfully complete the relevant course, you must regularly attend practical classes; have theoretical preparation for practical classes according to the subject; not to be late or miss classes; perform all the necessary tasks and work every class; be able to work with a partner or as part of a group; contact the course curators on various issues related to the subject of classes and receive it when you need it.

Students can discuss various tasks, but their implementation is strictly individual. Copying, use of various software tools, hints are not allowed. Students are not allowed to be late for practical classes.

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

All students of KHNMU are protected by the Regulation on Prevention, Prevention and Settlement of Cases Related to Sexual Harassment and Discrimination at Kharkiv National Medical University, developed to determine an effective mechanism for resolving conflict situations related to discrimination and sexual harassment. This Regulation was developed on the basis of the following normative legal acts of Ukraine: Constitution of Ukraine; Law of Ukraine "On Education"; Law of Ukraine "On Higher Education"; the Law of Ukraine "On Principles of Prevention and Counteraction of Discrimination in Ukraine"; Law of Ukraine "On Ensuring Equal Rights and Opportunities of Women and Men"; Convention on the Protection of Human Rights and Fundamental Freedoms; Convention on Combating Discrimination in the Field of Education; Convention on the elimination of all forms of discrimination against women; General Recommendation No. 25 to paragraph 1 of Article 4 of the Convention on the Elimination of All Forms of Discrimination against Women; General Comment No. 16 (2005) "The Equal Enjoyment of Economic, Social and Cultural Rights for Men and Women" (Article 3 of the International Covenant on Economic, Social and cultural rights; UN Committee on Economic, Social and Cultural Rights); Recommendations on education in the spirit of international mutual understanding, cooperation and peace and education in the spirit of respect for human rights and fundamental freedoms (UNESCO); Concept of the State Social Program for ensuring equal rights and opportunities for women and men for the period until 2021. Kharkiv National Medical University provides education and work that is free from discrimination, sexual harassment, intimidation or exploitation. The University recognizes the importance of privacy. All persons responsible for the implementation of this policy (employees of deans' offices, faculties, institutes and the Center for Gender Education, members of the student self-government and ethics committee, the vice-rector for scientific and pedagogical work) observe confidentiality regarding persons who report or are accused of discrimination or sexual harassment (except in situations where disclosure is required by law 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 identity, or marital status. All rights, privileges, programs and activities granted to students or employees of the university are extended to all without exception, subject to proper qualifications. The anti-discrimination and anti-sexual harassment policy of KhNMU is confirmed by the Code of Corporate Ethics and the Charter of KhNMU.

Students are expected to attend all lectures and practical sessions. If they missed the class, it is necessary to complete it (according to the schedule on the information stand of the department)

Written and homework assignments must be completed in full and on time, if students have questions, they can contact the teacher in person or by e-mail, which the teacher will provide at the first practical session.

Behavior in the audience:

During the lecture, male and female students are recommended to keep a summary of the lesson and maintain a sufficient level of silence. Asking questions to the lecturer is absolutely normal.

Practical training

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

- respect for colleagues,
- tolerance for others and their experiences,
- receptivity and impartiality,

- the ability to disagree with an opinion, but respect the personality of the opponent,
- thorough reasoning of one's opinion and the courage to change one's position under the influence of evidence,
- self-expression, when a person avoids unnecessary generalizations, describes his feelings and formulates his wishes based on his own thoughts and emotions,
- mandatory acquaintance with primary sources.

A creative approach in its various manifestations is welcome. Students are expected to be interested in participating in city, all-Ukrainian and international conferences, competitions and other events related to the subject profile.

It is important for students to follow the rules of appropriate behavior at the university. These rules are general for everyone, they also apply to all professors and teaching staff and employees, and fundamentally do not differ from generally accepted norms.

It is allowed during classes:

- leave the audience for a short time if necessary and with the teacher's permission;
- drink water;
- take photos of presentation slides;
- take an active part in the course of the lesson

It is forbidden:

- eat (with the exception of persons whose special medical condition requires otherwise - in this case, medical confirmation is required);
- smoking, consuming alcoholic and even low-alcohol drinks or narcotic drugs;
- speak obscenely or use words that insult the honor and dignity of colleagues and teaching staff;
- play gambling games;
- damage the material and technical base of the university (damage inventory, equipment, furniture, walls, floors, litter premises and territories);
- make noise, shout or listen to loud music in the classrooms and even in the corridors during classes.

Use of electronic gadgets. Use electronic gadgets for games, correspondence in social networks (except for breaks), loud conversations, etc. It is not allowed to use a mobile phone, tablet or other electronic gadgets during the lesson for a purpose not related to the educational process.

Policy regarding persons with special educational needs.

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

5. ACADEMIC HONESTY

Department of Hygiene and Ecology No. 2 supports zero tolerance for plagiarism. Male and female students are expected to want to constantly increase their own awareness in academic writing. In the first classes, information activities will be held on what exactly is considered plagiarism and how to correctly conduct a research and scientific search.

6. RECOMMENDED LITERATURE

Basic:

1. Ludmila Ševčíková. Environmental health. 2015. 253 p.
2. Аніщенко В.О. Основи екології: Навч. посібник. - К.: Кондор, 2008. - 148 с.
3. Hygiene and Ecology (Гігієна та екологія) : student's book. підручник / [V. G. Bardov, S. T. Omelchuk, N. V. Merezhkina et al.] ; ed. by V. G. Bardov. Translation from Ukrainian ed. — Vinnytsia : Nova Knyha, 2022. 456 pages.
4. Грицик В.(мол.), Канарський, Ю., БедрійЯ. Екологія довкілля. Охорона природи. Навч. посібник. - К.: Кондор, 2008. - 292 с.
5. Потіш А.Ф., Медвідь В.Г, Гвоздецький О.Г., Козак З.Я. Екологія: теоретичні основи і практикум: Навч посібник. - Львів: Магнолія плюс, 2006. - 324 с.

Additional:

1. Конституція України, 1996 р.
2. Закон України “Про охорону навколишнього природного середовища” від 25 червня 1991 р.
3. Закон України “Про природно-заповідний фонд України” від 16 червня 1992 р.
4. Закон України “Про охорону атмосферного повітря” від 16 жовтня 1991 р.
5. Кодекс України про надра від 24 липня 1994 р.
6. Лісовий кодекс України від 21 січня 1994 р.
7. Екологічний кодекс України.
8. Екологічне право України.

7. INFORMATIONAL RESOURCES

1. <http://distance.knmu.edu.ua/course/view.php?id=171>
2. Official web resources of the President of Ukraine, the Verkhovna Rada of Ukraine,
3. Official web resources of the Ministry of Education and Science,
4. Official web resources of the Ministry of Health,
5. Official web resources of Derzhirpromnadzor and other central authorities of Ukraine,
6. Educational portals of higher medical educational institutions of Ukraine
7. BF "Ekopravo-Lviv": <http://www.ecopravo.lviv.ua>.
8. Bulletin "Problems of chemical safety": <http://www.waste.com.ua/ucs/index.html>.
9. Web page of the Environmental Program of the European Commission:
10. http://www.europa.eu.int/comm/dgs/environment/index_en.htm.
11. Global resource information database: <http://www.grida.no>.
12. Eco-bulletin / REC-KYIV: <http://www.rec-kyiv.org.ua>.
13. Web directory of the environment: <http://www.webdirectory.com/>.
14. Ecological pages of Ukraine: <http://www.nature.org.ua>.
15. Ecological and cultural center "Bakhmat": <http://www.bakhmat.org>.
16. Environmental information finder: <http://www.isleuth.com/envi.html>.
17. Information on ecology: <http://www.emfund.com.ua>.

8. OTHER

Helpful links:

1. Provisions on the prevention, prevention and settlement of cases related to sexual harassment and discrimination at KhNMU http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/polog-sex.doc
2. Regulations on academic integrity and ethics of academic relationships at the Kharkiv National Medical University
http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/polog_ad_etyka_text.pdf
3. The procedure for conducting classes on in-depth study by students of the Kharkiv National Medical University of individual disciplines beyond the scope of the curriculum
http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/nak-poriad-pogl-vyv-dvsc.docx
4. Provisions on the Commission on Academic Integrity, Ethics and Conflict Management of KhNMU
http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/polog_komis_ad_text.pdf
5. Regulations on the recognition of the results of non-formal education at the Kharkiv National Medical University
http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/polog_neform_osv.pdf
6. INCLUSIVE EDUCATION:
http://www.knmu.kharkov.ua/index.php?option=com_content&view=article&id=7108%3A2021-03-10-14-08-02&catid=12%3A2011-05-10-07-16-32&Itemid=33&lang=uk
7. ACADEMIC INTEGRITY:
http://www.knmu.kharkov.ua/index.php?option=com_content&view=article&id=2520%3A2015-04-30-08-10-46&catid=20%3A2011-05-17-09-30-17&Itemid=40&lang=uk