

MINISTRY OF HEALTH OF UKRAINE  
KHARKIV NATIONAL MEDICAL UNIVERSITY

Department of Hygiene and Ecology No. 2

Academic year 2024–2025

**SYLLABUS OF EDUCATIONAL COMPONENT**

**«OCCUPATIONAL HEALTH AND SAFETY IN THE INDUSTRY»**

(name of educational component)

Mandatory 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

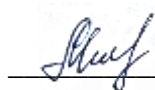
Form of education full-time

Branch of knowledge 22 «Health»

Specialty 223 «Nursing»

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

Protocol of  
«31» August 2023 No. 7  
Acting Head of Department



Ass.Prof. Merkulova T.V.

Approved by KhNMU Methodical  
Commission on Public Health Issues

Protocol of  
«31» August 2023 No. 2

Head



Prof. Ognev V.A.

## SYLLABUS DEVELOPERS

1. Zavgorodniy I.V., Doctor of Medical Sciences, Professor
2. Merkulova T.V., Candidate of Medical Sciences, Senior Researcher, Associate Professor

## INFORMATION ON TEACHERS TEACHING THE EDUCATIONAL COMPONENT

The name of the teacher	Position, academic title, scientific degree	Professional interests	Link to the teacher's profile
Merkulova T.V.	Candidate of Medical Sciences, Senior Researcher, Associate Professor at the Department of Hygiene and Ecology No 2	Hygiene and ecology	Moodle: <a href="http://31.128.79.157:8083/course/index.php?categoryid=31">http://31.128.79.157:8083/course/index.php?categoryid=31</a> +38(050) 738 58 08 tv.merkulova@knmu.edu.ua
Korobchanskyi P.O.	Cand. of Med. Sci., Ass. Prof. of Department of Hygiene and Ecology No. 2	Hygiene and ecology	Moodle: <a href="http://31.128.79.157:8083/course/index.php?categoryid=31">http://31.128.79.157:8083/course/index.php?categoryid=31</a>  po.korobchanskyi@knmu.edu.ua

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### **Information about consultations:**

**Full-time consultations:** schedule and venue according to the schedule of the training department.

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

**Location:** classes are held in the Department of Hygiene and Ecology № 2, KhNMU

## INTRODUCTION

Syllabus of the educational component "Occupational health and safety in the industry" is edited according to the educational professional program "Nursing" and to the Ukrainian higher education standard (following – Standard) of 1st (bachelor's) level of branch of science 22 "Health", specialty 223 "Nursing".

**Description of the educational component (abstract).** The study program of the discipline "Occupational health and safety in the industry" is designed for higher medical institutions of Ukraine in accordance with the requirements of the credit transfer system of the ECTS educational process, based on a combination of learning technologies by sections and credit assessment - units of student workload. or its section. The study of the discipline "Occupational health and safety in the industry" is aimed at acquainting students with the working conditions of medical workers in modern conditions, with harmful and dangerous factors of the production environment in treatment and prevention facilities, their impact on the physiological state of the working person. The work of medical workers is one of the most complex, intense and responsible activities.

Certain professional groups of medical workers in their daily activities have their own specific working conditions that can cause morbidity, including occupational, contribute to fatigue and overfatigue, disability. Recent decades have been characterized by significant advances in medical science and technology.

Medical engineering and biotechnology, various diagnostic systems, mainly computer systems, are being further developed, laser radiation, ultrasound and ionizing radiation are widely introduced into medical practice. Significantly increases the arsenal of drugs, especially antibiotics, as well as detergents and disinfectants. As a result, the content, nature and features of the work of both doctors and paramedics and paramedics are changing quite significantly. Such changes, as a rule, lead to a significant increase in the level of nervous, mental and intellectual stress. These relatively new problems have not pushed to the background such traditional problems of organizing the work of doctors as an unfavorable environment for chemical, physical and biological factors, overcoming nosocomial infections, prevention of allergic reactions, etc..

Thus, the study of the discipline "Occupational health and safety in the industry" is relevant for the training of medical personnel, especially in the current context of reforming the higher education system against the background of Ukraine's European integration processes..

**The subject** of the discipline are harmful and dangerous factors of the production environment and the system of measures to protect and preserve the life and health of health workers.

**Interdisciplinary links:** The study of the discipline "Occupational health and safety in the industry" in the specialty 223 "Nursing" is based on knowledge of basic natural sciences: medical biology, medical and biological physics, biological and bioorganic chemistry, human anatomy, histology, cytology and embryology, Latin, history of medicine, life safety, basics of bioethics and biosafety and integrates with these disciplines. Creates the basis for further study of clinical and hygienic disciplines. Lays the foundations for the formation of knowledge, skills and abilities, education of moral and ethical values, which are determined by the ultimate goals of the program, necessary for further professional activity.

**Prerequisites.** The study of the discipline involves the prior mastering of credits in theory and practice of clinical disciplines in the context of assessing the effect of methods of diagnosis and prevention of diseases and their consequences, optimizing the patient's route, department (MPE), etc.; with epidemiology in the context of measurements of population processes and information collection plans;

**Postrequisites.** The main provisions of the discipline should be applied in the study of disciplines of health care organization in the context of statistics of non-communicable diseases; social medicine in the context of measurements of population and individual health, features of registration of health-related events; medical informatics and computer technology.

## 1. THE PURPOSE AND OBJECTIVES OF THE DISCIPLINE

**1.1. The purpose of studying the educational component** «Occupational health and safety in the industry» is formation of future specialists' knowledge, skills and competencies, as well as education of safety culture to ensure effective management of occupational safety in the field of medicine, creation of favorable working environment and labor safety in accordance with current laws and regulations to implement the principle of priority of life and health of medical workers.

**1.2. The main objectives of the educational component** «Occupational health and safety in the industry» is to ensure the preservation of life, health and capacity for work of medical workers in industrial conditions through the use of a complex of legislative, organizational, engineering, sanitary, preventive and other measures, education of moral and ethical values aimed at preventing occupational injuries and occurrence occupational and occupationally stipulated diseases.

**1.3. Competences and results of training**, 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 academic component ensures that education seekers acquire the following **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 02. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of the subject area development, its place in the general system of knowledge about nature and society, in the development of society, technology and technology; the ability to use various types and forms of motor activity for active recreation and leading a healthy lifestyle.

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

GC 04. Ability to apply knowledge in practical situations.

GC 10. Ability to make informed decisions.

**professional:**

PC 01. The ability to apply professional and legal standards in daily professional practice.

PC 02. The ability to recognize and interpret signs of health and its changes, illness or disability (assessment/diagnosis), limitations of the possibility of full-fledged life activities, and to determine the problems of patients with various diseases and conditions.

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 04. Application of professional skills (abilities), medical means, interventions and actions to ensure the patient/client's with dignity, privacy (intimacy), confidentiality, protection of his rights, physical, psychological and spiritual needs on the basis of transcultural nursing, tolerant and non-judgmental behavior.

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 06. The ability to effectively apply a set of professional skills (abilities), medical supplies, interventions and actions in assessing the functional status of patients/clients, preparing them for diagnostic examinations and taking biological material for laboratory examinations.

PC 07. Preservation of specialist's own health in the implementation of care, performing manipulations and procedures, when moving and transporting the patient/client.

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 16. The ability to organize and manage the relevant structural unit (leadership and management).

**1.3.2.** Studying of the academic component provides education seekers' achieving of following **program learning outcomes:**

**PLO 4.** Monitor the work of junior medical staff and the state of inventory. In the conditions of health care facilities, in accordance with job duties, in order to comply with the sanitary and anti-epidemic regime, be able to:

- Conduct training of junior medical personnel on the performance of functional duties and occupational health and safety; monitor compliance with safety rules by junior medical personnel.
- Monitor the work of junior medical staff; control the implementation of the rules of the internal procedure by staff and patients; monitor compliance with measures of sanitary and hygienic regime in wards and medical offices.

**PLO 5.** Execute nursing administration. In the conditions of health care facilities, in order to implement organizational and management competencies, to be able to:

- make management decisions, ensure their implementation based on the application of nursing management models;
- ensure the implementation of orders and resolutions on health care issues;
- master the functional duties of the head of nursing services;
- know the procedure for licensing and accreditation of medical and preventive facilities, laboratories of various profiles, etc.

**PLO 6.** To ensure a healthy microclimate in the team, using the principles of nursing ethics and deontology, the rules of interpersonal communication in order to create a favorable psychological microclimate, to be able to:

- communicate with the patient and members of his family or close friends, medical staff;
- to solve ethical and deontological problems in the process of working with the patient and his family members; consider and analyze professional mistakes in the team; conduct training for junior and technical personnel.

**PLO 7.** To participate in the monitoring of healthy and sick population, rehabilitation and dispensary supervision. In the conditions of health care facilities, at home and in the community, using the current orders of the Ministry of Health of Ukraine, in order to form, preserve and improve the health of the adult and child population, to be able to:

- keep records of dispensary population groups;
- to calculate and analyze statistical data of dispensation efficiency;
- conduct explanatory work among patients of different dispensary groups;
- keep records of health groups;
- calculate and evaluate individual indicators and indicators of the complex effect of the microclimate on the human body;
- to determine the stages of medical and social rehabilitation of the patient, tasks for each stage;
- make a complex of rehabilitation measures depending on the profile, course, period of the disease or injury;
- conduct a census of the child population.

**1.3.3.** 1.3.4. The study of the **component** ensures that students acquire the following **social skills (Soft skills):**

- communicativeness (realized through: method of work in pairs and groups, brainstorming, 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, group work, training),
- leadership skills (implemented through: group work, project method, self-presentation method),

- sports development and effective recreation (implemented through: various types and forms of physical activity for active recreation and a healthy lifestyle),
- empathy (realized through: respect for the opinion and ethical considerations, appearance and behavior of other people),
- stress resistance (implemented through: group work with representatives of other professional groups of different levels and ages in unforeseen circumstances and situations).

## 2. INFORMATION SCOPE OF THE COURSE

Names of indices	Field of knowledge, specialty, educational degree, EPP	Characteristic of educational component	
		<b>Full-time education</b>	
Number of credits – 3	<u>Field of knowledge</u> <b>22 «Health»</b> <small>(code and name)</small>	Normative	
Total number of hours – 90	Specialty: <b>223 «Nursing»</b> <small>(code and name)</small>	<b>Year of training:</b>	
		4	
		<b>Semester</b>	
		7	
Hours for day (or evening) form of study: classroom – 40 student's independent work – 50	Education level: the first (bachelor's) level	<b>Lectures</b>	
		20 hours	
		<b>Practical, seminar</b>	
		20 hours	
		<b>Laboratory</b>	
		-	
EPP «Nursing»	<b>Independent work</b>		
	50 hours		
	<b>Individual tasks:</b>		
		-	
		<b>Kind of control:</b> credit	

### 2.1 Description of educational component

#### 2.1.1 Lectures

No.	Topic name	Number of hours	Kinds of lectures
1	The legal and organizational foundations of labor protection. The concept and subject of labor protection. The main legislative and regulatory framework in Ukraine regarding labor protection, as well as international legislative and regulatory acts on labor protection. State supervision and management of labor protection.	2	Lecture hall /online
2	Hygiene and physiology of work, their significance in creating safe working conditions. Classification of hazardous and harmful factors, types of work, and physiological features in the human body during work. Human performance. The physiological essence of fatigue and measures to prevent its development.	2	Lecture hall /online
3	Harmful and hazardous factors in the working	2	Lecture hall

	environment and the labor process		/online
4	Professional hazards when performing the functional duties of medical workers. Classification of the work of medical professionals. Basic methods and criteria for the sanitary-hygienic assessment of the working conditions of medical workers	2	Lecture hall /online
5	Main harmful and hazardous professional factors. Measures to reduce the adverse effects of occupational hazards on the health of medical workers.	2	Lecture hall /online
6	Hygienic requirements for the design and construction of healthcare facilities. Hygiene and occupational safety in medical institutions. Occupational safety requirements for production and auxiliary premises and the organization of workplaces.	2	Lecture hall /online
7	Certification of workplaces. Organization and procedure for conducting certification of workplaces. Job conditions assessment form.	2	Lecture hall /online
8	Injuries and occupational diseases in the field. Legal requirements for the investigation and recording of accidents and emergencies in production. Injuries, acute and chronic occupational diseases, and poisoning in medicine.	2	Lecture hall /online
9	Safety requirements during the operation of essential medical equipment. Basics of occupational safety for medical workers.	2	Lecture hall /online
10	Dangerous infectious diseases in the practice of healthcare workers. Prevention of nosocomial infections as a component of occupational safety in medicine. HIV, AIDS, Tuberculosis in the physician's practice.	2	Lecture hall /online
	<b>Total hours</b>	<b>20</b>	

### 2.2.2 Seminar lessons – not provided by the curriculum

### 2.2.3 Practical lessons

No.	Topic name	Number of hours	Teaching methods	Forms of control
<b>Section of discipline 1. General issues of occupational safety</b>				
1.	Legal and organizational fundamentals of occupational safety	2	story-explanation, conversation, illustration, demonstration, presentation	oral examination; test control; essays
2.	Organization of occupational safety in medical establishments and higher medical schools.	2	story-explanation, conversation, illustration, demonstration, presentation	oral examination; test control; essays
3.	Occupational hygiene and physiology, importance for creation of safe labour conditions	2	story-explanation, conversation, illustration, demonstration, presentation	oral examination; test control; essays



<b>Section of discipline 2. Features of labor conditions in the field of medicine</b>				
4.	Occupational hazards in execution of functional duties by medical workers	2	story-explanation, conversation, illustration, demonstration, presentation	oral examination; test control; essays
5.	Hygienic characteristic of labour conditions and state of health of medical workers	2	story-explanation, conversation, illustration, demonstration, presentation	oral examination; test control; essays
6.	Accidents and damages in medical-preventive establishments, their investigation and registration	2	story-explanation, conversation, illustration, demonstration, presentation	oral examination; test control; essays
<b>Section of discipline 3. Special issues of occupational safety in the field of medicine</b>				
7.	Hygiene and occupational safety in medical establishments	2	story-explanation, conversation, illustration, demonstration, presentation	oral examination; test control; essays
8.	Fundamentals of industrial safety of medical workers	2	story-explanation, conversation, illustration, demonstration, presentation	oral examination; test control; essays
9.	Dangerous infectious diseases in the work of medical specialists	2	story-explanation, conversation, illustration, demonstration, presentation	oral examination; test control; essays
10.	Occupational safety in some structural units of medical-preventive establishments and higher medical schools	2	story-explanation, conversation, illustration, demonstration, presentation	oral examination; test control; essays
<b>Total hours</b>		<b>20</b>		

**2.2.4. Laboratory lessons** – not provided by the curriculum

### 2.2.5. Independent work

No.	Topic name	Number of hours	Teaching methods	Forms of control
<b>Section of discipline 1. General issues of occupational safety</b>				
1.	Legal and organizational fundamentals of occupational safety	5	Study of textbook material, normative-legal acts of the current sanitary legislation, solution of situational tasks	oral examination; test control; essays

2.	Organization of occupational safety in medical establishments and higher medical schools.	5	Study of textbook material, normative-legal acts of the current sanitary legislation, solution of situational tasks	oral examination; test control; essays
3.	Occupational hygiene and physiology, importance for creation of safe labour conditions	4	Study of textbook material, normative-legal acts of the current sanitary legislation, solution of situational tasks	oral examination; test control; essays
<b>Section of discipline 2. Features of labor conditions in the field of medicine</b>				
4.	Occupational hazards in execution of functional duties by medical workers	4	Study of textbook material, normative-legal acts of the current sanitary legislation, solution of situational tasks	oral examination; test control; essays
5.	Hygienic characteristic of labour conditions and state of health of medical workers	4	Study of textbook material, normative-legal acts of the current sanitary legislation, solution of situational tasks	oral examination; test control; essays
6.	Accidents and damages in medical-preventive establishments, their investigation and registration	4	Study of textbook material, normative-legal acts of the current sanitary legislation, solving of situational tasks	oral examination; test control; essays
<b>Section of discipline 3. Special issues of occupational safety in the field of medicine</b>				
7.	Hygiene and occupational safety in medical establishments	6	Study of textbook material, normative-legal acts of the current sanitary legislation, solving of situational tasks	oral examination; test control; essays
8.	Fundamentals of industrial safety of medical workers	6	Study of textbook material,	oral examination; test control;

			normative-legal acts of the current sanitary legislation, solving of situational tasks	essays
9.	Dangerous infectious diseases in the work of medical specialists	6	Study of textbook material, normative-legal acts of the current sanitary legislation, solving of situational tasks	oral examination; test control; essays
10.	Occupational safety in some structural units of medical-preventive establishments and higher medical schools	6	Study of textbook material, normative-legal acts of the current sanitary legislation, solving of situational tasks	oral examination; test control; essays
	<b>Total hours</b>	<b>50</b>		

**Teaching methods:**

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

**Methods of control:**

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

When studying the discipline, the current and final semester control is used. Also, there is a mandatory control of the assimilation of educational material of the discipline, assigned to independent work.

Current control (assimilation of certain topics): conducted in the form of oral interviews, testing, conversations of students on pre-defined issues, in the form of speeches of higher education students with reports when discussing educational issues in practical classes.

In order to assess the independent work of students, an alternative option is offered (*optional*): traditional types of tasks: writing a test, abstract or creative types: preparation of a multimedia presentation, elaboration of educational literature (compilation of annotations, reviews, citations, abstracts)).

Final control in the discipline is a mandatory form of control over the academic achievements of higher education students. It is performed orally. The terms of the final semester control are set by the schedule of the educational process, and the amount of educational material that is submitted for the final semester control is determined by the curriculum of the discipline.

The total number of rating points for the study of the discipline for the 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 amount of points for the semester is 200 points, the minimum - 120 points.

Assessment of students' success in ECTS organization of the educational process (CEA, test, differential test, exam) is carried out on the basis of "Instruction for assessing the educational

activities of higher education at Kharkiv National Medical University", approved by the order of KhNMU dated 21.08.2021 No. 181. The test is a form of final control of academic activity in the discipline.

### 3. EVALUATION CRITERIA

**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 higher education at the Kharkiv National Medical University"

Applicants' knowledge is assessed in all types of training sessions according to the following criteria:

1) "**Excellent**" - corresponds to a high (creative) level of competence:

- the applicant 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**" - receives the applicant on two levels of assessment depending on the number of points scored and corresponds to a sufficient (constructive-variable) level of competence:

- the applicant 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 applicant is able to compare, summarize, systematize information under the guidance of a 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 applicant reproduces a significant part of the theoretical material, shows knowledge and understanding of the basic provisions; with the help of a teacher can analyze educational material, correct mistakes, among which there are a significant number of significant;

- the applicant has the training material at a level higher than the initial, a significant part of it reproduces at the reproductive level

4) "**Unsatisfactory**" - corresponds to a low (receptive-productive) level of competence:

- the applicant has not mastered the educational 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 from the results of the current control and points obtained from the results of the final semester control. The maximum amount of points for the semester is 200 points, the minimum - 120 points. Assessment of students is carried out in accordance with the "Instructions for assessing the educational activities of students in the European credit transfer system for the organization of the educational process at KhNMU".

*The current educational activity of students (hereinafter - CEA)* is controlled by the teacher of the academic group, after students master each topic of the discipline and grades are set using a 4-point (national) system. At the end of the semester, the average grade (to the nearest hundredth) for CEA teacher automatically receives using the electronic journal of the ACS.

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

Incentives and penalties. For participation in research student conferences, in scientific researches, in interrogations the student can receive additional points 1 - 10.

Assessment of individual tasks of the applicant is carried out by performing the tasks of the teacher:

- report of the abstract at a practical lesson 0 - 2 points;
- report with a presentation at a practical lesson 0 - 3 points,

- report at scientific and practical conferences of the department, university, writing abstracts, articles 0 - 5 points;
- participation in the scientific-practical conference - 5 - 10 points

Elimination of academic debt is carried out by self-study of theoretical material, followed by oral interviews, testing and discussion of the topic of missed classes with the teacher. In the case of a sufficient level of knowledge on the subject, academic debt is considered eliminated. Free practice is carried out within 30 days from the moment of missed class (without permission from the dean's office), if the period from the moment of missed class exceeds 30 days of practice is carried out only in case of permission to liquidate academic debt from the dean's office, taking into account discipline classes of which are carried out on a paid basis.

Evaluation of current educational activities (CEA)

The conversion of the average grade for current activities into a multi-point scale is carried out in accordance with the "Instruction for assessing the educational activities of higher education students at Kharkiv National Medical University" (Table 1, 2).

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

The final score for the current educational activity (CEA) is defined as the arithmetic mean of traditional grades for each lesson, rounded to 2 decimal places and is listed on a multi-point scale according to table 2.

Table 2

**Recalculation of the average score for current activities in a multi-point scale  
(for disciplines ending with 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	<b>Under 3</b>	<b>Insufficient</b>
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

Discipline assessment technology (Table 6 of the "Instruction for assessing the educational activities of students...").

**Test** (in accordance with the "Instruction for assessing the educational activities of students...") is conducted by the teacher of the academic group in the last lesson of the discipline and provides for the consideration of CEA (table) and verification of all topics in the discipline. The score is determined in points from 120 to 200 and marked "passed", "not passed".

### 3.2.-3.3. Test questions and Control questions.

1. Basic terms and definitions in the field of occupational safety: labor protection, working conditions, harmful production factor, dangerous production factor, safe working conditions, workplace, safety, etc.
2. Subjects and objects of occupational safety.
3. The current state of occupational safety in Ukraine and abroad.
4. General issues of occupational safety in medicine.
5. Legal bases of occupational safety (Constitution of Ukraine, Code of Labor Laws, Law of Ukraine "On Labor Protection", etc.).
6. Normative-legal acts on labor protection (NPAOP): definitions, basic requirements and features. The structure of NPAOP. Register of NPAOP.
7. National standards of Ukraine on labor protection. System of labor safety standards (SSB). Sanitary, construction norms, other national documents on labor protection.
8. Acts on labor protection, operating in the organization, their composition and structure. Instructions on labor protection. Development and approval of labor protection acts in force in the organization.
9. Liability of officials and employees for violations of labor protection legislation.
10. Social partnership as a principle of legislative and normative-legal provision of labor protection. Social dialogue in the European Union.
11. International norms of social responsibility. Standard SA 8000 "Social responsibility". International standard ISO 26000 "Guidelines for social responsibility".
12. Legislative basis of the European Union on labor protection. EU directives on labor protection. Framework Directive 89/391 / EC "On the introduction of measures to improve the safety and health of workers".
13. Labor standards of the International Labor Organization. ILO Conventions and Recommendations. The main ILO conventions in the field of labor protection.
14. International cooperation in the field of labor protection. The main areas of cooperation. United Nations. World Health Organization. International Atomic Energy Agency. International Labor Organization. European Union.
15. State Labor Service of Ukraine, its structure and functions.
16. Responsibility of officials and employees for violations of labor protection legislation.
17. Sectoral programs to improve safety, occupational health and the working environment. Regulations on the organization of labor protection management system in the industry. Order of the Ministry of Health No.268 dated 30.09.94 "On the labor protection service of the system of the Ministry of Health".

18. Structure, main functions and tasks of labor protection management in medical institutions. The labor protection service of the medical-preventive establishments (MPE), its structure, number, main tasks and functions. Rights and responsibilities of labor protection employees.
19. Commission on labor protection in medical institutions, main tasks and rights. Offices of industrial safety and labor protection, main tasks and directions of work.
20. Planning of labor protection measures. Identification, assessment and reduction of risks of dangerous events, quality management and safety culture. Accounting and analysis of labor protection indicators. Plans for localization and elimination of emergencies and accidents.
21. Principles of organization, types of training and testing of knowledge on occupational safety. Occupational safety briefings, their types. Stimulation of occupational safety.
22. Socio-economic effect of occupational safety of medical workers.
23. Occupational hygiene and physiology - definition, purpose, tasks, research methods.
24. Classification of hazardous and harmful production factors.
25. Basic physiological signs of physical and mental work. Physiological changes that occur in the organs and systems of the human body during work.
26. Human capacity for work, dynamics and reasons for its change during the working day.
27. Physiological essence of fatigue, existing theories and modern understanding of the mechanism of its occurrence.
28. Ways to prevent fatigue. Methods of developing rational regimens of work and rest.
29. Classification of work of medical workers.
30. Psychophysiological harmful and dangerous factors of the production environment and their impact on the health of health workers.
31. Physical harmful and dangerous factors of the work environment and their impact on the health of healthcare workers.
32. Chemical harmful and dangerous factors of the production environment and their impact on the health of healthcare workers.
33. Biologically harmful and dangerous factors of the production environment and their impact on the health of healthcare workers.
34. Hygienic features of working conditions and health status of doctors of different profiles (surgical, therapeutic, dental, etc.).
35. Features of occupational and industrial morbidity of medical workers.
36. Basic methods and criteria of sanitary and hygienic assessment of working conditions of medical workers. The concept of severity, tension, harmfulness and danger of work.
37. Certification of work places by working conditions. Purpose, main tasks and content of certification. Organization of works and the order of attestation of workplaces. Chart of working conditions.
38. Methods of investigation and registration of accidents at work. Methods of investigation and registration of non-productive accidents.
39. Injuries, acute and chronic occupational diseases and poisonings in medicine, methods of their accounting and investigation. Measures to prevent accidents, injuries and occupational diseases of medical workers.
40. Safety requirements during the operation of basic medical equipment.
41. Measures to reduce physical and mental overload of health workers. Scientific organization of work in the hospital. Rational organization of the workplace and furniture. The main ways to prevent fatigue.
42. Measures to reduce the adverse effects of physical factors on the body of health professionals. Requirements for the microclimate.
43. Measures to reduce the adverse effects of noise, vibration, ultrasound.
44. Requirements for industrial lighting of medical workers' workplaces.

45. Requirements for ultraviolet radiation, electromagnetic fields of radio frequencies and laser radiation in the workplace of medical workers.
46. Requirements for ionizing radiation of medical and pharmaceutical workers.
47. Measures to reduce the adverse effects of chemical factors on the body of health professionals. Ways to prevent air pollution of the working area with harmful chemicals.
48. Measures to prevent the harmful effects of biological factors. Sanitary and anti-epidemic regime of the hospital.
49. Hygienic education and health education.
50. Requirements for personal protective equipment and work clothes of medical workers.
51. Occupational safety of medical personnel in separate structural subdivisions of the hospital (operating room, radiodiagnostic subdivisions, physiotherapy rooms, pathology departments and morgues, etc.), the main normative documents regulating these issues.
52. Fundamentals of labor protection of personnel in the pharmaceutical industry.
53. Occupational safety in higher medical educational institutions.
54. Guarantees of workers' rights to labor protection, benefits and compensation for difficult and harmful working conditions. Responsibilities of employees to comply with the requirements of regulations on labor protection.
55. Labor protection of women, minors, the elderly and the disabled, the main regulations governing these issues.
56. The concept of dangerous infectious diseases.
57. HIV and AIDS in the doctor's practice. Possible ways of getting biological material from an HIV-infected medical worker. The concept of "industrial accident" and an emergency appeal to the AIDS Center / Institute of Infectious Diseases.
58. Viral hepatitis, their potential danger to healthcare professionals. Prevention of hepatitis virus infection and immunoprophylaxis in contact with biological materials of a patient with hepatitis.
59. General safety requirements for technological equipment and processes in the hospital. Safety during operation of pressure systems and cryogenic equipment.
60. Electrical safety. Classification of premises according to the degree of danger of electric shock.
61. Conditions of electric shock. Safe operation of electrical installations: electrical protective equipment and measures.
62. Fundamentals of fire safety. State fire supervision. Fire prevention during the design and operation of PHC and medical equipment.
63. Indicators of explosive properties of materials and substances. Categories of premises by explosion and fire hazard. Classification of explosive and flammable premises and zones. Fire resistance of building structures and materials.
64. The main means and measures to ensure fire safety of the production facility. Fire alarm. Fire extinguishers.
65. Actions of personnel in case of fire. Ensuring the safe evacuation of personnel. Ensuring and controlling the state of fire safety at production facilities. Training in fire safety rules for employees of hospitals.

### 3.4. Individual tasks

Individual work of students under the guidance of a teacher in the educational component "Occupational health and safety in the industry" is carried out during the semester in the form of: study of literature sources recommended for mastering topics and problems and preparing reports with presentations on them; study of normative documents recommended for studying various topics of the discipline; work with health databases; performance of individual tasks.

Part-time students must complete an individual assignment and send it to the teacher for verification (by e-mail) no later than 10 days before the start of the training session.

Tasks (topics) for individual work students choose independently, and coordinate it with teachers.



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

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

Inconsistency of content, too large or small amount of work, non-compliance with formal requirements for registration, lack of list of sources used or its incorrect design, insufficient structure of work, late submission of work for inspection are grounds for lowering the assessment or returning the work for revision.

### **3.5. Other incentives**

For participation in research student conferences, in scientific researches, in interrogations the student can receive additional points 1 - 10.

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

Rules for appealing the assessment. The grade in the discipline can be appealed on the basis of the requirements of the "Regulations on the organization of the educational process in KhNMU" No. 370 dated 27.08.2019, supplemented in accordance with the order No. 114 dated 20.05.2020.

## **4. DISCIPLINE POLICY**

Discipline requirements. In order to successfully complete the relevant course, it is necessary to regularly attend lectures and practical classes strictly in medical form; 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; contact the curators of the course on various issues on the subject of classes and receive it when you need it.

Class attendance and behavior.

Students can discuss different tasks, but their performance is strictly individual. Writing, use of various software tools, tips are not allowed. Students are not allowed to be late for practical classes and attendance without their medical form.

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

All KhNMU students are protected by the Regulations on Prevention, Prevention and Settlement of Cases Related to Sexual Harassment and Discrimination at Kharkiv National Medical University, designed to define an effective mechanism for resolving conflict situations related to discrimination and sexual harassment. This Regulation is developed on the basis of the following normative legal acts of Ukraine: the Constitution of Ukraine; Law of Ukraine "On Education"; Law of Ukraine "On Higher Education"; Law of Ukraine "On Principles of Preventing and Combating Discrimination in Ukraine"; Law of Ukraine "On Ensuring Equal Rights and Opportunities for Women and Men"; Convention for the Protection of Human Rights and Fundamental Freedoms; Convention for the Suppression of Discrimination in Education; Convention on the Elimination of All Forms of Discrimination against Women; General Recommendation № 25 to paragraph 1 of Article 4 of the Convention on the Elimination of All Forms of Discrimination against Women; cultural rights; UN Committee on Economic, Social and Cultural Rights); Recommendations on education in the spirit of international understanding, cooperation and peace and education in the spirit of respect for human rights and fundamental freedoms (UNESCO); The concept of the State social program to ensure equal rights and opportunities for women and men for the period up to 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 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 where the law requires disclosure 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.

Students are expected to attend all lectures and workshops. If they missed classes, it is necessary to work it out (according to the schedule on the information stand of the department)

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

Behavior in the lecture-hall:

During the lecture, students are recommended to keep a synopsis of the lesson and keep a sufficient level of silence. Asking questions to the lecturer is perfectly normal.

Practical lessons

- Active participation during the discussion in the audience, students should be ready to understand the material in detail, ask questions, express their point of view, discuss.

During the discussion it is important:

- respect for colleagues,
- tolerance for others and their experience,
- susceptibility and impartiality,
- the ability to disagree with the opinion, but to respect the identity of the opponent (s),
- careful argumentation of his opinion and the courage to change his position under the influence of evidence,
- self-expression, when a person avoids unnecessary generalizations, describes his feelings and formulates his wishes based on their 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, national and international conferences, competitions and other events in the subject profile.

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:

- leave the audience for a short time if necessary and with the permission of the teacher;
- to drink water;
- take photos of presentation slides;
- take an active part in the lesson
- It is 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 or listening to loud music in classrooms and even in corridors during classes.

Use of electronic gadgets. Use electronic gadgets for games, correspondence on social networks (except for breaks), loud conversations, etc. You are not allowed to use a mobile phone, tablet or other electronic gadgets during classes for purposes other than the educational process.

Policy for people with special educational needs.

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.

## 5. ACADEMIC INTEGRITY

The Department of Hygiene and Ecology № 2 maintains zero tolerance for plagiarism. 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.

## 6. RECOMMENDED LITERATURE

### Basic:

1. Occupational Health and Safety for Healthcare Workers: study guide/ O.P. Yavorovskiy, M.I.Veremei, V. I. Zenkina et al. – 3rd edition. – Kyiv: AUS Medicine Publishing, 2018. – 120 p.
2. Безпека життєдіяльності, основи охорони праці: навч. посіб. / О.П. Яворовський, В.М. Шевцова, В.І. Зенкіна та ін.; за заг. ред О.П. Яворовського. – К.: ВСВ “Медицина”, 2015. – 288 с.
3. Безпека життєдіяльності, основи охорони праці: Навчально-методичний посібник/ упор.: О.П. Яворовський, В.М. Шевцова, Г.А. Шкурко та ін.- Черкаси: видавець Чабаненко Ю.А., 2012. – 232 с.
4. Гігієна праці: Підручник /Ю.І. Кундієв, О.П. Яворовський, А.М. Шевченко та ін.; за ред. акад. НАН України, НАМН України, проф. Ю.І. Кундієва, чл-кор. НАМН України проф. О.П.Яворовського.- К.: ВСВ “Медицина”, 2011.- 904с.
5. Гігієна праці (методи досліджень та санітарно-епідеміологічний нагляд) /За ред..А.М.Шевченка, О.П.Яворовського. – Вінниця: Нова книга, 2005.
6. Охорона праці у фармацевтичній галузі: навч. посіб. /О.В.Жуковіна, О.І.Зайцев, О.І.Жуковін, Г.А.Грецька. –К.: Медицина, 2009, -432с.
7. Гігієна та охорона праці медичних працівників: навч.посібник /За ред. В.Ф.Москаленка, О.П.Яворовського. – К.: ВСВ «Медицина», 2009. – 176 с.
8. Свидовый В.И. Гигиена и охрана труда медицинских работников /В.И.Свидовый, Е.Е.Палишкина. – СПб ГМД им. И.И.Мечникова, 2006. -90с.
9. Конституція України. Основний закон від 28.06.1996.
10. Кодекс законів про працю України. Закон № 322-VIII від 10.12.71.
11. Основи законодавства України про охорону здоров'я № 2802-XII від 19.11.92.
12. Закон України “Про охорону праці” від 14.10.92.
13. Закон України “Про забезпечення санітарного та епідемічного благополуччя населення” № 4004-XII від 24.02.94.
14. Закон України «Про пожежну безпеку»
15. Закон України «Про загальнообов'язкове державне соціальне страхування від нещасного випадку на виробництві та професійного захворювання, які спричинили втрату працездатності».

### Additional:

1. Закони України “Про протидію захворюванню на туберкульоз” № 2586-III від 05.07.2001.
2. Постанова Кабінету Міністрів України “Порядок розслідування та ведення обліку нещасних випадків, професійних захворювань і аварій на виробництві” № 1232 від 30 листопада 2011 року.
3. Постанова Кабінету Міністрів України №1662 від 08.11.2000 “Про затвердження переліку професійних захворювань”.

4. Постанова Кабінету Міністрів України № 442 від 1.08.1992 “Про Порядок проведення атестації робочих місць за умовами праці”.

5. Наказ МОЗ України № 268 від 30.09.94 “Про службу охорони праці системи Міністерства охорони здоров'я України”.

6. Наказ МОЗ України №246 від 21.05.2007 року “Про затвердження Порядку проведення медичних оглядів працівників певних категорій”.

7. Наказів МОЗ України № 955 від 05.11.2013 “Порядок проведення екстреної постконтактної профілактики ВІЛ-інфекції у працівників при виконанні професійних обов'язків”.

8. “Гігієнічна класифікація праці за показниками шкідливості та небезпечності факторів виробничого середовища, важкості та напруженості трудового процесу”, затверджена наказом МОЗ України № 248 від 08.04.2014.

9. Наказ Держнаглядохоронпраці України № 15 від 26.01.05 “Типове положення про порядок проведення навчання і перевірки знань з питань охорони праці”.

10. Норми радіаційної безпеки України (НРБУ-97). – Київ: Відділ поліграфії Українського центру держсанепіднагляду МОЗ України, 1998. – 125 с.

11. ДСН 3.3.6.039-99 “Державні санітарні норми виробничої загальної та локальної вібрації”.

12. ДСН 3.3.6.037-99 “Державні санітарні норми виробничого шуму, ультразвуку та інфразвуку”.

13. ДСН 3.3.6.042-99 “Санітарні норми мікроклімату виробничих приміщень”.

14. ДБН В.2.5-28-2006 “Природне та штучне освітлення”.

15. ДСанПінН 3.3.6.096-2002 “Державні санітарні норми і правила при роботі з джерелами електромагнітних полів”.

16. ДСТУ 2293-99 “Охорона праці. Терміни та визначення основних понять”.

17. ДБН В.2.2-9:2009 “Громадські будинки та споруди”.

18. ДБН В 2.2-10-01 “Проектування закладів охорони здоров'я”.

19. Наказ МОН України № 563 від 01.08.01 “Положення про організацію роботи з охорони праці учасників навчально-виховного процесу в установах і закладах освіти”.

20. ДНАОП 0.00-1.21-98 “Правила безпечної експлуатації електроустановок споживачів”.

21. НАОП 9.1.50-1.10-84 (НПАОП 85.11-1.10-84) “Правила з техніки безпеки при експлуатації виробів медичної техніки в установах охорони здоров'я. Загальні вимоги”.

22. НАОП 9.1.50-1.13-59 (НПАОП 85.11-1.13-59) “Правила обладнання і експлуатації інфекційних установ (інфекційних відділень, палат), а також охорони праці персоналу цих установ”.

23. НАОП 9.1.50-2.02-3 (ОСТ 42-21-15-83) “Кабінети рентгенодіагностичні. Вимоги безпеки”.

24. НАОП 9.1.50-6.04-91 “Методичні рекомендації щодо поліпшення умов праці медичних працівників, які зайняті ультразвуковою діагностикою”.

## 7. INFORMATION RESOURCES

1. Official Internet Representation of the President of Ukraine <http://www.president.gov.ua/>.

2. Verkhovna Rada of Ukraine <http://www.rada.gov.ua/>.

3. Cabinet of Ministers of Ukraine <http://www.kmu.gov.ua/>.

4. Ministry of Health of Ukraine <http://moz.gov.ua/ua/portal/>.

5. Ministry of Education and Science of Ukraine <http://www.mon.gov.ua/>.

6. Ministry of Ecology and Natural Resources of Ukraine <http://www.menr.gov.ua/>.

7. State Service of Ukraine for Emergencies <http://www.dsns.gov.ua/>.

8. State Service of Ukraine for Labor <http://dsp.gov.ua/>.

9. World Health Organization <http://www.who.int/en/>.

10. International Labor Organization <http://www.ilo.org/global/lang--en/index.htm>.

## 8. OTHERS

1. Useful links:
2. Regulations on prevention and settlement of cases related to sexual harassment and discrimination in KhNMU [http://files.knmu.edu.ua:8181/upload/redakt/doc\\_uchproc/polog-sex.doc](http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/polog-sex.doc)
3. Regulations on Academic Integrity and Ethics of Academic Relations at Kharkiv National Medical University
4. [http://files.knmu.edu.ua:8181/upload/redakt/doc\\_uchproc/polog\\_ad\\_etyka\\_text.pdf](http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/polog_ad_etyka_text.pdf)
5. The procedure for conducting classes on in-depth study by students of Kharkiv National Medical University of certain disciplines in excess of the curriculum  
[http://files.knmu.edu.ua:8181/upload/redakt/doc\\_uchproc/nak-poriad-pogl-vyv-dvsc.docx](http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/nak-poriad-pogl-vyv-dvsc.docx)
6. Regulations 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](http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/polog_komis_ad_text.pdf)
7. Regulations on the recognition of the results of non-formal education at Kharkiv National Medical University  
[http://files.knmu.edu.ua:8181/upload/redakt/doc\\_uchproc/polog\\_neform\\_osv.pdf](http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/polog_neform_osv.pdf)
8. INCLUSIVE EDUCATION:
9. [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](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)
10. ACADEMIC INTEGRITY:
11. [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](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)
12. [http://files.knmu.edu.ua:8181/upload/redakt/doc\\_uchproc/kodex\\_AD.docx](http://files.knmu.edu.ua:8181/upload/redakt/doc_uchproc/kodex_AD.docx)