

MINISTRY OF HEALTH OF UKRAINE
KHARKIV NATIONAL MEDICAL UNIVERSITY

Department of internal and occupational diseases

Academic year 2023-2024

SYLLABUS OF THE ACADEMIC COMPONENT

«Nursing in occupational pathology»

Mandatory educational component

Form of education full-time

Field of science 22 «Health»

Specialty 223 «Nursing»

Education and professional program «Nursing»

The first (bachelor's) level of higher education

Course third

The syllabus of the educational component was considered at the meeting of the Department of internal and occupational diseases

Protocol №1

“28” August 2023 № 1

Head of department



B.O. Shelest

Approved by Methodical commission of KhNMU

of problems problems

professional training

therapeutic profile

Protocol №1

“31 ” August 2023 № 1

Head



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INTRODUCTION

Syllabus of the **educational component** “**Nursing in occupational pathology**” is edited according educational professional program “Nursing” and to Ukrainian higher education standard (following – Standard) of 1st (bachelor’s) level of branch of science 22 “Health”, specialty 223 “Nursing”.

Description of academic component .

“**Nursing in occupational pathology**” is studied during 3rd year of studying. Material is divided into two structure parts. 34 hours of class lessons and 54 hours of education seekers’ independent work are provided by the program. Form of control – credit. The program of the educational component "Nursing in occupational pathology" is dedicated to the in-depth study of the conditions of influence of adverse factors of production, through the combination of professional knowledge, abilities and skills of diagnosis and monitoring of the state of health of the worker in certain branches of industrial production and agriculture, the clinical course of occupational diseases and intoxications, classification, issues of examination of working capacity, rehabilitation, provision of emergency care and nursing care for patients, in order to ensure theoretical and practical training of applicants - to form a holistic view of the holistic model of occupational pathology.

The academic component "Nursing in occupational pathology" is the study of the methodology, theory and practice of diagnosis, differential diagnosis, treatment and prevention of diseases of internal organs that arise under the influence of harmful factors in the industrial environment or work process

Interdisciplinary links. Nursing in occupational pathology as an educational component:

- a) is based on the study of medical chemistry, biological and bioorganic chemistry, medical and biological physics, pathophysiology, pathomorphology, pharmacology, hygiene and ecology, social medicine, organization and economics of health care, propaedeutics of internal medicine, internal medicine, phthisiology, dermatology, venereology, psychiatry, narcology, otorhinolaryngology, obstetrics and gynecology, neurology, traumatology and orthopedics, and integrates with these disciplines;
- b) lays the foundations for students studying internal medicine and other clinical disciplines, which involves the integration of teaching with these disciplines and the formation of skills to apply knowledge of occupational diseases in the process of further education and in professional activities;
- c) lays the foundations of a healthy lifestyle and prevention of functional impairment during work.

Link to the page of the academic educational component in MOODLE

<https://distance.knmu.edu.ua/course/view.php?id=5283>

1. THE AIM AND TASK OF THE ACADEMIC COMPONENT

1.1. The aim of the academic component “to provide students of higher education with a fundamental and logically consistent system of knowledge of a practical orientation, necessary for the diagnosis of the most common occupational diseases, the organization of measures aimed at their prevention, through monitoring and analysis, research and critical clinical thinking in the process of applying knowledge of theoretical, practical and evidence-based medicine in occupational diseases, for the purpose of effective provision of medical assistance to workers of industrial enterprises or during sanitary supervision, prevention of possible harmful effects of occupational factors on the body.

1.2. The main task of the academic component is provision of basic knowledge of occupational diseases; promoting the development of creative thinking and the ability to critically process information; development of educational and cognitive abilities; definition of the general principles of occupational pathology.

1.3. Competences and learning outcomes, the formation of which is facilitated by the educational component (the relationship with the normative content of the training of higher education applicants, formulated in terms of learning outcomes in the EPP and the Standard).

1.3.1. The study of the academic component ensures that education seekers acquire the following **competencies**:

Integral: The ability 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 (GK):

GK 03. Ability to abstract thinking, analysis and synthesis

GK 04. Ability to apply knowledge in practical situations

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

GK 10. Ability to make informed decisions

Special (professional competences (PC))

PC 01. Ability to apply professional and legal standards in everyday professional practice.

PC 06. The ability to effectively apply a set of professional skills (skills), medical devices, interventions and actions in assessing the functional state of patients with occupational pathology, preparing them for diagnostic studies and taking biological material for laboratory studies.

PC 12. The ability to orientate in determining the group belonging of medicines, the peculiarities of their pharmacokinetics and pharmacodynamics in occupational pathology.

PC 13. The ability to identify the relationship between clinical manifestations of diseases and the results of additional research methods in a patient with occupational pathology.

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

PRN 1. 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 institutions and at home, through communication with patients, be able to collect complaints, disease history, life history, allergic history, epidemiological history, evaluate anamnestic data and conduct an objective examination of a patient with suspected occupational disease and established diagnosis of an occupational disease.

PLO 2. Carry out nursing diagnosis: identify and assess the patient's 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 of an occupational disease.

PLO 3. Plan nursing interventions. In the conditions of health care facilities, at home and under unforeseen circumstances, be able to draw up a plan of nursing interventions to solve the real and accompanying problems of patients with suspected occupational disease and with an established diagnosis of occupational disease.

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. Carry out nursing administration. In the conditions of health care, in order to implement organizational and managerial competencies, to be able to:

- make management decisions, ensure their implementation based on the application of nursing management models;

- to ensure the implementation of orders and resolutions on issues of health protection of workers and patients with occupational diseases;

- master the functional duties of the head of nursing services;

- to know the procedure for licensing and accreditation of medical and preventive facilities, laboratories of a professional pathology profile.

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, be able to:

- communicate with a patient suspected of having an occupational disease and with an established diagnosis of an occupational disease and members of his family or close circle, medical personnel;

- to solve ethical and deontological problems in the process of working with a patient suspected of having an occupational disease and with an established diagnosis of an occupational disease 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 a patient with an occupational disease, rehabilitation and dispensary supervision, to know the peculiarities of working capacity and work in case of occupational diseases. 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, be able to:

- keep records of dispensary population groups;
- to calculate and analyze statistical indicators of dispensation efficiency;
- to 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;
- 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.

PLO 8. To perform medical manipulations in order to ensure a sanitary and anti-epidemic regime.

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

PLO 14. To be able to prepare the patient, collect and direct biological material for laboratory and instrumental research.

PLO 16. Ability to accuracy in the implementation of interdependent nursing functions.

PLO 20. Appropriate medical documentation should be kept

1.3.3. Studying of the academic component provides education seekers' achieving of the following **Soft-skills:**

- communication (implemented through: the method of working in groups and brainstorming during the analysis of clinical cases, the method of presenting the results of independent work and defending them in a group),
- team work (implemented through: the method of working in groups and brainstorming during the analysis of clinical cases),
- conflict management (implemented through: business games),
- time management (implemented through: self-organization method during classroom work in groups and independent work),
- leadership skills (implemented through: a method of presenting the results of independent work and defending them in a group).

2. INFORMATION VOLUME OF THE ACADEMIC COMPONENT

Name of indicators	Branch of knowledge, speciality and education level, EPP	Characteristics of the component
		full-time education
Number of credits – 3	Branch of Knowledge 22 «Health»	Normative
The total number of hours is 90	Specialty: 223 «Nursing»	Year of preparation:
		3rd
		Semester
		1st
Hours for full-time education: class – 36 Independent student's work – 54	Education level: the first (bachelor's) level	Lectures
		6
		Practical, seminars
		30 hours
	EPP «Nursing»	Laboratory
		-
		Independent work
		54 hours
	Individual tasks:	
	Type of control:	
	Credit	

2.1. Description of the academic component

2.2.1. Lections

№ 3/II	Name	Hours	Type
1	Topic 1. General issues of occupational pathology	1	Thematic
	Topic 2. Professional pathology of dust etiology	1	Thematic
	Topic 3. Professional intoxication with substances with a predominant effect on the blood system	2	Thematic
	Topic 10. Vibration disease and sensorineural deafness. Altitude and caisson sickness	2	Thematic
Hours in total		6	

2.2.2. Seminar lessons

Not provided by curriculum.

2.2.3. Practical lessons.

№	Name	Hours	Methods of studying	Forms of control
1.	Topic 1. General issues of occupational pathology	3	Explanatory story, conversation, lecture, illustration, demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method, debates, "Brainstorming" method.	Oral interview (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report; declamation; poster report and others.
	Topic 2. Pneumoconioses	3	Explanatory story, conversation, lecture, illustration, demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method, debates, "Brainstorming" method.	Oral interview (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report; declamation; poster report and others.
2.	Topic 3. Chronic bronchitis and chronic obstructive lung disease of dust etiology	2	Explanatory story, conversation, lecture, illustration, demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method, debates, "Brainstorming" method.	Oral interview (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report; declamation; poster report and others.
	Topic 8. Occupational respiratory diseases	3	Explanatory story, conversation, lecture, illustration,	Oral interview (individual and frontal); written

	of toxic-chemical etiology		demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method, debates, "Brainstorming" method.	survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report; declamation; poster report and others.
3.	Topic 4. Professional intoxication with substances with a predominant effect on the blood system	2	Explanatory story, conversation, lecture, illustration, demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method, debates, "Brainstorming" method.	Oral interview (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report; declamation; poster report and others.
	Topic 5. Professional neurotoxicosis	3	Explanatory story, conversation, lecture, illustration, demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method, debates, "Brainstorming" method.	Oral interview (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report; declamation; poster report and others.
4.	Topic 6. Professional intoxication with pesticides	2	Explanatory story, conversation, lecture, illustration, demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method, debates, "Brainstorming" method.	Oral interview (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report; declamation; poster report and others.

	Topic 7. Occupational toxic hepatitis and toxic nephropathy	2	Explanatory story, conversation, lecture, illustration, demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method, debates, "Brainstorming" method.	Oral interview (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report; declamation; poster report and others.
5.	Topic 10. Vibration disease and sensorineural deafness. Altitude and decompression sickness	3	Explanatory story, conversation, lecture, illustration, demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method, debates, "Brainstorming" method.	Oral interview (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report; declamation; poster report and others.
6.	Topic 11. Occupational diseases caused by the influence of electromagnetic radiation and ultrasound, microclimate.	2	Explanatory story, conversation, lecture, illustration, demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method, debates, "Brainstorming" method.	Oral interview (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report; declamation; poster report and others.
	Topic 12. Occupational diseases related to overstrain of individual organ systems	3	Explanatory story, conversation, lecture, illustration, demonstration, presentation, video clips, video films, discussion, simulation of processes and situations, case method, project method,	Oral interview (individual and frontal); written survey; test control; creative tasks; individual tasks; abstracts; mutual control; self-control; report;

			debates, "Brainstorming" method.	declamation; poster report and others.
	Credit	2	Content-based learning	oral quiz (individual and frontal), written quiz, test, self-test
	Total hours:	30		

2.2.4. Laboratory class

Not provided by curriculum.

2.2.5. Independent work

№	Name	Hours	Methods of studying	Forms of control
1.	Acquaintance with the scientific and educational literature of the topics indicated in the program.	7	Study and analysis of basic and auxiliary literature, videos, video films, discussion of case methods, "Brainstorming", webinar, virtual consultation.	Oral survey; creative tasks; individual tasks; abstracts; portfolio method; self-control; report; declamation; poster report and others.
2.	Processing of lecture material.	6	Study and analysis of basic and auxiliary literature, videos, video films, discussion of case methods, "Brainstorming", webinar, virtual consultation.	Oral survey; creative tasks; individual tasks; abstracts; portfolio method; self-control; report; declamation; poster report and others.
3.	Preparation for practical classes.	15	Study and analysis of basic and auxiliary literature, videos, video films, discussion of case methods, "Brainstorming", webinar, virtual consultation.	Oral survey; creative tasks; individual tasks; abstracts; portfolio method; self-control; report; declamation; poster report and others.

4.	Consultations with the teacher during the semester.	6	Study and analysis of basic and auxiliary literature, videos, video films, discussion of case methods, "Brainstorming", webinar, virtual consultation.	Oral survey; creative tasks; individual tasks; abstracts; portfolio method; self-control; report; declamation; poster report and others.
5.	Independent processing of individual issues of the educational component.	5	Study and analysis of basic and auxiliary literature, videos, video films, discussion of case methods, "Brainstorming", webinar, virtual consultation.	Oral survey; creative tasks; individual tasks; abstracts; portfolio method; self-control; report; declamation; poster report and others.
6.	Preparation and implementation of individual tasks in the form of essays, abstracts, etc.	5	Study and analysis of basic and auxiliary literature, videos, video films, discussion of case methods, "Brainstorming", webinar, virtual consultation.	Oral survey; creative tasks; individual tasks; abstracts; portfolio method; self-control; report; declamation; poster report and others.
7.	Preparation for the final control.	5	Study and analysis of basic and auxiliary literature, videos, video films, discussion of case methods, "Brainstorming", webinar, virtual consultation.	Oral survey; creative tasks; individual tasks; abstracts; portfolio method; self-control; report; declamation; poster report and others.
8.	The topics and questions for independent preparation and individual tasks	5	Study and analysis of basic and auxiliary literature, videos, video films, discussion of case methods,	Oral survey; creative tasks; individual tasks; abstracts; portfolio method; self-

	coincide with those for practical classes.		"Brainstorming", webinar, virtual consultation.	control; report; declamation; poster report and others.
	Hours in total	54		

Teaching methods

Types of educational activities of students of the component according to the curriculum are: a) practical classes, b) independent work of the student of the component.

Thematic plans of practical classes and independent work ensure the implementation of all topics in the educational process. The topics of the course reveal the problematic issues of the relevant sections of occupational diseases. The course makes maximum use of various didactic tools - multimedia presentations, educational films, audio recordings, demonstrations of thematic patients.

Practical classes according to the method of their organization are clinical analysis and include:

- examination of a patient with one or another occupational disease; - formulation of the preliminary diagnosis;
- appointment of necessary additional instrumental and laboratory examination methods;
- carrying out differential diagnosis;
- justification of the final professional diagnosis; - prescribing the necessary treatment;
- resolution of issues of work capacity examination;
- determination of primary and secondary prevention measures.

Practical classes take place in a specialized clinic and consist of four structural parts: 1) mastering the theoretical part of the topic, 2) curation of the thematic patient, 3) work of the student of the component to practice practical skills with the help of phantoms and work with the patient under the supervision of the teacher, 4) development solving situational tasks and test-control of mastering the material.

The independent work of the student of the education component occupies an important place in the study of the discipline. In addition to the traditional out-of-classroom training of students of the component for the study of topics that are not included in the plan of classroom classes, it includes their work in hospital departments, clinical laboratories and departments of functional diagnostics in out-of-classroom time, the effectiveness of which must be ensured by teachers. Independent work includes patient care. During the period of study of the educational component, the writing of epicrisis is provided. Individual work can be carried out in the following format: presentation of an essay at a practical session; reports at clinical conferences of the department's bases; medical history reports at a practical session; writing theses, articles, etc.

Control methods

Control methods and the evaluation system are carried out in accordance with the requirements of the optional course program and the "Instructions for the evaluation of educational activities of students of the component in the conditions of the implementation of the European Credit Transfer System of the organization of the educational process", approved by the Ministry of Health of Ukraine on 04.15.2014.

Current control is carried out at each practical session according to the specific goals of each topic. When evaluating the educational activity of students of the component, it is necessary to give preference to standardized methods of control: testing, structured written works, structured according to the procedure of control of practical skills in conditions close to real ones.

The final examination is carried out after the completion of the study of all topics of the module in the last examination session. It is recommended to use the following tools for diagnosing the level of training of the students of the component: computer and form testing, solving situational problems, the ability to make a diagnosis, evaluating the results of research methods, controlling practical skills, answering standardized theoretical questions.

It is recommended to conduct practical classes including:

1) control of the initial level of knowledge with the help of tests composed in the format of questions with 5 answer options, of which 1 is correct;

2) a survey of students of the component education on the subject of the class;

3) management of 1-2 patients with diseases and conditions corresponding to the topic of the lesson, followed by a discussion of the correctness of establishing a diagnosis, differential diagnosis and treatment measures using the principles of evidence-based medicine and in accordance with National and European guidelines and protocols;

4) consideration of the results of additional research methods (laboratory and instrumental), which are used in diagnosis and differential diagnosis, the consideration of which is provided by the subject of the practical session;

5) control of the final level of knowledge based on test tasks compiled in the Step-2 format.

Mastery of the topic (current control) is monitored in a practical lesson in accordance with specific goals, mastery of content sections - in practical final lessons. It is recommended to use the following means of assessing the level of training of the students of the component: computer tests, solving situational problems, conducting laboratory studies and interpreting and evaluating their results, analyzing and evaluating the results of instrumental studies and parameters characterizing the functions of the human body, monitoring the assimilation of practical skills.

The current educational activity (CEA) is carried out by the teacher of the academic group, after the students have mastered the component of each topic of the educational component and grades are given using the 4-point (traditional) system. At the end of the semester, the teacher automatically receives the average grade (to the nearest hundredth) for the current activity using the electronic log of the ASU system.

The final class (CS) is held after the logically completed part of the educational component, which consists of a set of educational elements of the program, which

combines all types of training (theoretical, practical, etc.), elements of the educational and professional program (the educational component, all types of practices, attestations), which are implemented by appropriate forms of the educational process.

The final lesson is taken by the teacher of the academic group. The forms of conducting the software should be standardized and include control of all types of training (theoretical, practical, independent, etc.), solving the "Step-2" test tasks provided for in the work program of the educational component. It is recommended to use the following means of diagnosis of the level of training of the students of the component: test control, solving situational problems, control of practical skills, in particular, the ability to correctly conduct patient care, prescribe and interpret the results of laboratory and instrumental examination, justify the diagnosis based on the analysis of sanitary and hygienic, clinical and auxiliary methods of examination.

When evaluating the mastery of the subjects of the practical lesson, the students of the component are given grades on a 4-point (traditional) scale. At the beginning of the lesson, the students of the component solve the test tasks "Step-2" in the amount of 30 tasks, then at the patient's bedside, the teacher of the group takes practical skills, which are evaluated "passed", "didn't pass", then students of the component write a written work, each ticket contains 5 theoretical questions, which include questions for independent work, after that an oral interview is held with the student of the component, after which a traditional assessment is given software

The individual tasks of the learner of the component (IZS) are evaluated in ECTS points (no more than 10), which are added to the sum of points scored for the current educational activity.

The final grade for the current educational activity (PND) and final classes (PW) is defined as the arithmetic average of traditional grades for each lesson and PW, rounded to 2 decimal places and converted into a multi-point scale.

Recommendations for conducting the final class:

1. Solving a package of test tasks based on the content of the educational material, which includes the following:

- basic test tasks from the educational component, which cover the content of the educational material of the final lesson in accordance with the RNPД in the amount of 30 tests, corresponding to LII "Step-2" - an open database of test tasks of LII "Step-2". The evaluation criterion is 90.5% of correctly solved tasks; "passed" or "failed");

2. Evaluation of the development of practical skills (evaluation criteria - "passed" or "failed").

3. During the evaluation of the knowledge of the student of the component on theoretical questions, as well as questions for independent work, included in this final lesson (SP), the student of the component is given a traditional assessment, which is converted into a multi-point scale together with the scores for CEA (table 1).

4. Tasks for practical and professional training, which reflect skills and abilities during the curation of thematic patients, evaluation of the results of laboratory and instrumental research methods and selection of treatment tactics, which are specified in the lists of training programs of disciplines (TPD) and OKH specialties.

5. Tasks on diagnosis and providing assistance in emergency situations (within the scope of TPD and OKH specialty).

3. EVALUATION CRITERIA

3.1. Evaluation of applicants for higher education is carried out in accordance with the "Instructions for assessing the educational activities of applicants for higher education in KhNMU" (Order of KhNMU №181 from 21.08.2021)

Recalculation of the average grade for the current educational activity (CEA) into a multi-point scale is carried out in accordance with Table 1.

Table 1

Recalculation of the average grade for the current control into a multi-point scale (for educational components that end with a final exam or an exam)

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

Conducting and evaluating a differentiated credit or exam (table 3, 4 or 5 from the "Instructions for evaluating the educational activity of students...").

The recalculation of the average grade for PND and PZ for the educational components that end with a diploma is carried out in accordance with Table 1. The minimum number of points that a student must score for admission to a diploma is 70 points, a minimum positive grade on the diploma and, accordingly, 50 points.

Assessment of individual student tasks

Individual tasks of the student of education - from the educational component (hereinafter - IW) contribute to a more in-depth study of the theoretical material by the

student of education, formation of skills of using knowledge to solve relevant practical tasks.

Types of individual tasks from the educational component are determined by the curriculum. The terms of receipt, execution and defense of individual tasks are determined by the schedule, which is developed and approved at the meeting of the department for each semester. PPE is performed by the student independently with the necessary consultations from a scientific and pedagogical worker. There are cases where multiple students perform IW on a complex topic.

IW are evaluated in points (no more than 10), which are added to the points obtained for the CIS after completing the study of the educational component or its part, when conducting a "test", "differentiated test" or "exam".

The total sum of points for CEA and IW cannot exceed 120 points. For the educational component, the form of control of which is "credit", the sum of points for the CEA and IW cannot exceed 200 points.

Assessment of students' independent work

The educational material of the educational component, intended for assimilation by the student of education in the process of independent work, is submitted to the final control together with the educational material that was studied during classroom training classes.

Table 2

Evaluation of theoretical knowledge and practical skills, if they are presented in one ticket

Number of questions	«5»	«4»	«3»	Oral answer to the examination card which contain theoretical and practical parts of the discipline	For each answer student gets from 10 to 16 points, which is equivalent: «5» - 16 points; «4» - 13 points; «3» - 10 points.
1	16	13	10		
2	16	13	10		
3	16	13	10		
4	16	13	10		
5	16	13	10		
	80	65	50		

Evaluation of the educational component

Evaluation of the educational component (hereinafter referred to as the EC) is a final control conducted after the learner has mastered the educational material from the educational component on the basis of his performance of certain types of work in practical, seminar or laboratory classes, completion of individual tasks and independent work. Evaluation of the educational component is carried out after the completion of the study of the educational component in the form of "credit", "differential credit", "exam".

Evaluation technology of the educational component

For educational components, the study of which ends in the current semester, and the form of control is "credit" it is assumed that admission to the exam is calculated in CEA points from 70 to 120 points. Directly, the credit is evaluated from 50 to 80 points. The assessment from the educational component is the sum of points for CEA, IW and credit and ranges from 120 to 200 points.

For educational components, the study of which ends in the current semester, and the form of control is "differentiated credit", it is assumed that admission to the DC is calculated in CEA points from 70 to 120 points. Directly, DC is evaluated from 50 to 80 points. The assessment from the educational component is the sum of points for CEA, IW and DC and ranges from 120 to 200 points.

Correspondence of grades on a 200-point scale, a four-point (national) scale and the EUTS scale

Grade by 200-points scale	Grade by ECTS scale	Grades by 4-points (national) scale
180–200	A	Excellent
160–179	B	Good
150–159	C	Good
130–149	D	Satisfactory
120–129	E	Satisfactory
Less than 120	F, Fx	Not satisfactory

Educators who have fulfilled the requirements of the programs of the educational component and were allowed to take the final control ("differentiated assessment" or "exam"), but did not pass it or did not appear, are assigned a grade of Fx.

Education seekers who were not allowed to take the "differentiated assessment" or "exam" due to insufficient points for CIS, the department issues a note "not allowed" (grade F).

A student who is allowed to take a differentiated assessment or exam, but did not appear for it, is notified by the department as "did not appear" (grade Fx). The dean considers the reason for missing a differentiated assessment or exam:

"respectful" or "disrespectful". If the absence was "disrespectful", the dean marks "unsatisfactory".

After the semester control for the educational component, or their parts, ending with the control form "credit", "differentiated credit" and "exam", the person responsible for the organization of educational and methodical work at the department or the teacher assigns the student an appropriate assessment according to table 3 "Scale evaluation at KhNMU", which is added (appendix 3) to the individual study plan of the student and fills in the information on success in the educational component.

3.2. Questions for differential credit

3.3. Test questions

1. Professional pathology as a clinical discipline. Classification of occupational diseases.
2. Historical information on the development of occupational pathology.
3. Organization of the occupational pathology service and the structure of occupational morbidity in Ukraine.
4. Medical ethics and issues of medical deontology in professional pathology
5. Features of clinical examination and diagnosis of occupational diseases.
6. Principles of prevention of occupational poisoning and diseases. Organization and conduct of preliminary and periodic medical examinations of employees.
7. Pneumoconiosis: etiology, pathogenesis, classification, diagnosis. Treatment.
8. Basic issues of prevention of pneumoconiosis. Examination of working capacity.
9. Silicosis. Pathogenesis. Clinical picture. Diagnostics. Treatment. Examination of working capacity.
10. Coniotuberculosis. Pathogenesis. Classification. Clinic. Diagnostics. Treatment. Prevention. Examination of working capacity.
11. Silicatosis (asbestosis, cement pneumoconiosis). Clinical picture Diagnostics. Treatment. Examination of working capacity.
12. Carboconiosis (anthracosis, graphitosis). Clinical picture. Diagnostics. Treatment. Examination of working capacity.
13. Metalloconiosis (siderosis, aluminosis). Clinical picture. Diagnostics. Treatment. Examination of working capacity.
14. Pneumoconiosis of electric welders. Clinical picture. Diagnostics. Treatment. Prevention. Examination of working capacity.
15. Hypersensitive pneumonitis. Features of the clinical course. Diagnostics.
16. Berylliosis. Pathogenesis. Clinic. Diagnostics. Treatment. Prevention. Examination of working capacity.
17. Bisinosis. Features of the clinical picture. Diagnostics. Treatment. Examination of working capacity.
18. Chronic obstructive pulmonary disease of dust etiology. Reasons. Pathogenesis. Classification. Clinic. Differential diagnosis. Treatment. Prevention. Examination of working capacity.
19. Classification of occupational diseases of the blood system.
20. Intoxication with benzene. Classification. Mechanism of action. Clinical picture. Diagnostics. Treatment. Prevention. Examination of working capacity.
21. Intoxication with amino and nitro compounds. Pathogenesis. Clinical picture. Diagnostics. Treatment. Examination of working capacity. Prevention.
22. Carbon(II) oxide poisoning. Mechanism of action. Classification. Clinical picture. Diagnostics. Prevention. Examination of working capacity.
23. Arsine intoxication. Pathogenesis. Clinical picture. Diagnostics. Treatment. Examination of working capacity. Prevention.
24. Saturnism. Pathogenesis of hematological disorders.

25. Lead intoxication. Features of the clinical picture. Forms of the disease.
26. Main diagnostic criteria of sideroachrestic anemia in lead intoxication.
27. Methods of treatment of lead intoxication. Prophylactic means. Examination of working capacity.
28. Modern ideas about the mechanism of action of toxic-chemical agents on the development of pathology of the bronchopulmonary system.
29. Acute lesions of respiratory organs of toxic-chemical etiology. Pathogenesis, clinic, diagnosis, treatment, examination of working capacity, prevention.
30. Acute toxic pulmonary edema. Pathogenesis. Clinic, periods. Complication. Treatment.
31. Chronic lung lesions of toxic-chemical etiology. Pathogenesis. Clinic. Diagnostics. Treatment. Prevention. Examination of working capacity.
32. Characteristics of hepatotropic substances.
33. Pathogenetic features of toxic hepatitis.
34. Toxic hepatitis. Clinical forms depending on the type of chemical factor.
35. Treatment of toxic hepatitis. Prevention methods. Examination of working capacity.
36. Characteristics of chemicals that have a nephrotoxic effect. The main industries of production are at increased risk of exposure to these substances.
37. Kidney and urinary tract diseases of professional origin. 38. Toxic nephropathy. Pathogenesis. Features of the clinic. Prevention. Treatment. Examination of working capacity.
39. Poisoning by organochlorine compounds. Pathogenesis. Clinical picture. Treatment. Examination of working capacity. Prevention.
40. Poisoning by organophosphorus compounds. Pathogenesis. Clinic. Treatment. Examination of working capacity. Prevention.
41. Poisoning by organomercury compounds. Pathogenesis. Clinic. Treatment. Examination of working capacity. Prevention.
42. Poisoning by compounds containing arsenic. Pathogenesis. Clinic. Treatment. Examination of working capacity. Prevention.
43. Poisoning by carbamic acid derivatives. Pathogenesis. Clinic. Treatment. Examination of working capacity. Prevention.
44. Poisoning by mineral fertilizers. Classification. Pathogenesis. Clinical picture. Diagnostics. Examination of working capacity. Prevention.
45. Characteristics of substances with neurotropic action.
46. Mercury poisoning. Pathogenesis. Classification, clinical picture. Diagnostics. Treatment. Prevention. Examination of working capacity.
47. Manganese poisoning. Pathogenesis. Classification. Clinic. Diagnostics. Treatment. Prevention. Examination of working capacity.
48. Poisoning with tetraethyl lead. Mechanism of action. Classification. Clinic. Treatment. Prevention. Examination of working capacity.
49. Intoxication with carbon disulfide. Pathogenesis. Clinic. Treatment. Prevention. Examination of working capacity.
50. Basic principles of emergency care and antidote therapy for acute occupational poisoning.

51. Occupational bronchial asthma. Characteristics of allergens that cause occupational bronchial asthma.

52. Classification of occupational bronchial asthma. Pathogenesis.

53. Clinical manifestations of occupational bronchial asthma. Diagnostic features. Prevention. Examination of working capacity.

54. Exogenous allergic alveolitis. Etiology. Pathogenesis. Clinical manifestations. Diagnostics. Prevention. Issues of medical and social examination and labor rehabilitation.

55. Characteristics of professional factors that cause malignant neoplasms - chemical, physical and biological factors.

56. Production processes associated with the risk of developing malignant neoplasms.

57. The main clinical variants of occupational oncological diseases.

58. Features of diagnosis of neoplasms of occupational etiology.

59. Principles of prevention and modern aspects of treatment of occupational neoplasms.

60. Medical and social examination for occupational oncological diseases.

61. Medical and social rehabilitation of patients with occupational oncological pathology.

62. Vibration disease due to the effect of local vibration. Pathogenesis, classification, features of the clinic, diagnosis, differential diagnosis, treatment, examination of working capacity, prevention.

63. Vibration disease due to the effect of general vibration. Pathogenesis, classification, features of the clinic, diagnosis, differential diagnosis, treatment, examination of working capacity, prevention.

64. Methods of laboratory and instrumental diagnosis of vibration pathology.

65. Neurosensory deafness. Pathogenesis, classification, clinic, diagnosis, treatment, examination of working capacity, prevention.

66. Caisson disease. Pathogenesis. Clinic. Diagnostics. Treatment. Prevention. Examination of working capacity.

67. Altitude sickness. The mechanism of action of reducing the partial pressure of oxygen in inhaled air. Clinic. Treatment. Prevention.

68. The influence of radio frequency electromagnetic waves on the human body. Mechanism of action. Main clinical syndromes. Treatment. Prevention. Examination of working capacity.

69. The effect of laser radiation on the human body. Mechanism of action. Clinical picture. Treatment. Prevention. Examination of working capacity.

70. Occupational diseases caused by exposure to ultrasound.

71. Overheating in the production environment. Pathogenesis. Clinical picture. Diagnostics. Treatment. Prevention. Examination of working capacity.

72. Hypothermia in the production environment. Pathogenesis. Clinical picture. Diagnostics. Treatment. Prevention. Examination of working capacity.

73. Identify the main professions that belong to the risk group for the development of occupational diseases of the musculoskeletal system.

74. The main clinical forms of occupational dyskinesias. Pathogenesis. Clinical picture. Diagnostics. Treatment. Prevention. Examination of working capacity.

75. Differential diagnosis of occupational diseases of the musculoskeletal system.

76. Chronic myofibros. Pathogenesis. Clinical picture. Diagnostics. Treatment. Prevention. Examination of working capacity.

77. Bursitis. Pathogenesis. Clinical picture. Diagnostics. Treatment. Prevention. Examination of working capacity.

78. Periarthritis of the shoulder joint. Pathogenesis. Clinic. Diagnostics. Treatment. Prevention. Examination of working capacity.

79. Mono- and polyneuropathy of the upper and lower extremities. Vegetative-sensory radiculopathies and radiculomyelopathy. Clinical picture. Diagnostics. Treatment. Prevention. Examination of working capacity.

3.4. Individual tasks

1. Analyze the data of the sanitary and hygienic characteristics of working conditions and the professional history of the patient to determine the possibility of developing an occupational disease.

2. Carry out a clinical examination of the patient in order to identify signs of a possible occupational disease.

3. To analyze the mechanism of action of adverse factors of the industrial environment that caused the development of an occupational disease.

4. Determine the presence of possible accompanying non-professional diseases in the patient.

5. Carry out differential diagnosis between presumed occupational and non-occupational diseases.

6. Determine specific features of the course of this occupational disease.

7. Prescribe treatment, draw up a plan of individual preventive and rehabilitation measures.

8. To resolve issues regarding the patient's ability to work and employment based on the characteristics of the clinical picture, the patient's profession, and working conditions.

9. Develop plans for preliminary and periodic medical examinations of employees.

10. To analyze the results of periodic medical examination and, based on it, to plan preventive measures to improve working conditions and reduce general and occupational morbidity.

11. Draw up a plan for sanitary and educational work at the enterprise.

12. Carry out a clinical examination of the patient in order to identify signs of a possible occupational disease caused by exposure to industrial aerosols, using the results of laboratory and instrumental studies.

13. Evaluate the X-ray picture, determine the characteristic signs of pneumoconiosis.

14. Analyze the features of spirometry data.

15. Prescribe treatment, draw up a plan of individual preventive and rehabilitation measures for occupational diseases caused by exposure to industrial aerosols

16. To resolve issues of work capacity and rational employment in case of occupational diseases caused by exposure to industrial aerosols based on the clinical picture of the disease, the degree of functional disorders, the profession of the patient, and working conditions.

17. To draw up a dispensary monitoring plan for a patient with an occupational disease caused by exposure to industrial aerosols.

18. To carry out a clinical examination of the patient in order to identify signs of a possible occupational disease caused by the influence of chemical factors, while applying the results of laboratory and instrumental studies.

19. Assess the content of toxic substances in biological environments: mercury, lead in urine, carboxy- and methemoglobin in blood.

20. Prescribe treatment, draw up a plan of individual preventive and rehabilitation measures for occupational diseases caused by exposure to chemical factors.

21. To know the methods of antidote therapy for occupational poisoning. 22. To solve the issue of working capacity and rationality

employment for occupational diseases caused by exposure to chemical factors based on the clinical picture of the disease, the degree of functional disorders, the profession of the patient, and working conditions.

23. To draw up a plan for dispensary observation of a patient with an occupational disease caused by exposure to chemical factors.

24. To analyze the mechanism of action of adverse factors of the industrial environment, which could be factors in the development of an occupational disease.

25. Carry out a clinical examination of the patient in order to identify signs of possible toxic damage to the respiratory, hepatobiliary, urinary, nervous systems of professional origin.

26. To be able to interpret the results of clinical, biochemical and instrumental research methods.

27. Assess the content of toxic substances in biological environments.

28. Determine the degree and stability of respiratory disorders, hepatobiliary, urinary, and nervous systems in order to justify the diagnosis.

29. To resolve the issue of treatment, work capacity and rational employment based on the clinical picture of the disease, the degree of functional disorders of organs and systems.

30. To carry out a clinical examination of the patient in order to identify signs of a possible occupational disease caused by exposure to chemicals with a predominant damage to the nervous system, using the results of laboratory and instrumental studies.

31. Interpret the results of laboratory and instrumental research methods in cases of intoxication with predominant damage to the nervous system.

32. To have methods of antidote therapy for intoxications with a predominant damage to the nervous system.

33. To conduct a clinical examination of the patient in order to identify signs of a possible occupational allergic disease, using the results of laboratory and instrumental, allergological studies.

34. Interpret the results of allergy tests.

35. To be able to apply modern principles of treatment of an allergic condition of professional genesis.

36. To analyze the mechanism of the possible action of unfavorable factors of the industrial environment, which caused the development of oncological pathology of a professional nature.

37. To carry out a clinical examination of the patient in order to identify signs of a possible oncological disease of occupational origin, using the results of laboratory and instrumental studies.

38. To draw up a plan of medico-social and rehabilitation measures for patients with oncological diseases of occupational etiology.

39. Analyze the data of the sanitary and hygienic characteristics of working conditions and the professional history of the patient to determine the main physical adverse factors in the development of vibration disease.

40. Determine the features of the course of vibration disease depending on the type of vibration.

41. Carry out a clinical examination of the patient in order to identify signs of a possible occupational disease caused by the action of physical factors, while applying the results of laboratory and instrumental research.

42. Analyze the results of instrumental methods of research: palesthesiometry, capillaroscopy, audiometry.

43. Prescribe treatment, draw up a plan of individual preventive and rehabilitation measures for occupational diseases caused by the action of physical factors.

44. To resolve the issue of work capacity and rational employment in the case of occupational diseases caused by the action of physical factors based on the clinical picture of the disease, the degree of functional disorders, the profession of the patient, and working conditions.

45. To draw up a plan for dispensary observation of a patient with an occupational disease caused by the action of physical factors.

46. Identify the main harmful factors of the industrial environment that cause diseases associated with physical exertion and overstrain of individual organs and systems.

47. To carry out a clinical examination of the patient in order to identify signs of a possible occupational disease caused by physical exertion and overstrain of individual organs and systems, while applying the results of laboratory and instrumental studies.

48. To evaluate the results of laboratory and instrumental research on the diagnosis of these diseases.

49. Carry out differential diagnosis between presumed occupational and non-occupational diseases.

50. Prescribe treatment, draw up a plan of individual preventive and rehabilitation measures for occupational diseases caused by the impact of physical exertion and overstrain of individual organs and systems.

51. To solve the issue of work capacity and rational employment in case of occupational diseases caused by the influence of physical load and overstrain of individual organs and systems based on the clinical picture of the disease, the degree of functional disorders, the profession of the patient, and working conditions.

52. To draw up a plan for dispensary observation of a patient with an occupational disease caused by the impact of physical exertion and overstrain of individual organs and systems.

3.5. Rules for appealing of evaluation. The review of the appeal of the results of the final control of the knowledge of the students of education is a component of the organizational support of the educational process and is conducted in order to determine the objectivity of the assessment. The main task of the appeal procedure is to overcome the elements of subjectivism when assessing the knowledge of education seekers, to avoid misunderstandings and controversial situations, to create favorable conditions for the development and real provision of the legal rights and interests of students. The procedures for appeals and contesting the assessment are carried out in accordance with the Order of the Kharkiv National Medical University dated September 30, 2020 No. 252 "Regulations on the appeal of the results of the final control of students of the Kharkiv National Medical University".

4. ACADEMIC COMPONENT'S POLICY

Educational component requirements. The educational component is normative for the applicant's education component. The learner of the component is obliged to fully master the knowledge, skills, practical skills and competencies of the educational component. At the same time, the presence and activity of the component student during practical classes and lectures must be taken into account.

Attendance and behavior. It is important for the student 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. For the high efficiency of the educational process, the student of the component must comply with the following rules:

- attend practical classes according to the schedule;
- necessarily in a medical gown and slippers, with an ID confirming the identity;
- you must have a mask, gloves, stethoscope and tonometer with you; - do not be late for classes;
- to comply with the rules of internal regulations of the university; - do not talk during classes;
- turn off the mobile phone;
- do not miss classes without valid reasons; - timely and diligently perform assigned tasks;
- do not copy or use plagiarism;

- be polite and friendly to classmates and teachers; - to be punctual and obligatory.

Use of electronic gadgets. Use computer equipment and electronic gadgets in accordance with regulatory documents during face-to-face and distance learning.

Policy regarding persons with special educational needs. It is carried out in accordance with the document of the State Standard for Persons with Special Educational Needs.

5. ACADEMIC INTEGRITY

The university has introduced a system of academic integrity, which establishes norms, rules and principles regarding the observance of academic integrity and ethics of academic relations as an integral component in ensuring the quality of higher education and scientific activity at the Kharkiv National Medical University in order to create a positive moral climate in the team and ensure quality of higher education at the University, and also regulates the organization and measures for prevention, detection and responsibility for their violations, stipulates the organization of the work of the Academic Integrity Commission, conflict management ethics, as well as the Academic Integrity Promotion Group as a component of the quality of education.

On the official website of KhNMU, in the "Academic integrity" section, there is an information base - a set of regulatory documents and organized information used during the functioning of the system for ensuring academic integrity at the university. With the help of informational materials of the base, the principles of ensuring academic freedom and a favorable moral and psychological climate in the collective and increasing the authority of the Khnru National University are popularized.

Applicants of higher education may be held liable for the following: lowering the assessment results of a test, exam, credit, etc.; repeated assessment (tests, exams, assessments, etc.); appointment of additional control measures; limitation of the violator's participation in scientific research, exclusion from certain scientific projects; deprivation of the right to participate in competitions for receiving scholarships, grants, etc.; exclusion from the composition of the University Student Council; exclusion from the Scientific Society of component education students, post-graduate students, doctoral students and young scientists; removal from the position of headman, from the team of Olympiad participants, not being included in such a team during the school year; repeating the corresponding educational component of the educational program; repeated performance of scientific and/or qualification work; notification of the entity that finances the applicant's education, the applicant's parents about the violation; prohibition of representation of the University in any events for a certain period; announcement of a reprimand with entry in the personal file of the violator; expulsion from the University.

Scientific, scientific-pedagogical and pedagogical workers of the University may be held liable for the following: exclusion from the composition of collegial bodies of the University; deprivation of the right to participate in competitions for obtaining funding for conducting scientific research and implementing educational projects, scholarships, grants; deprivation of honorary titles, awards, scholarships, etc., awarded by the University; conducting an additional check for signs of academic plagiarism of all works authored by the offender; prohibition of representation of the University in any events for a certain period; announcement of a reprimand with entry in the personal file of the violator; release.

Sources of information on academic integrity

On the official website of KhNMU, in the "Academic integrity" section, there is an information base - a set of regulatory documents and organized information used during the functioning of the system for ensuring academic integrity.

There are 3 courses on academic integrity on the Moodle platform, in the KhNMU distance learning system.

During the "Freshman's Info Week" in September 2020, the Director of the KhNMU Scientific Library and the deans familiarized the students of higher education with the system of academic integrity of the KhNMU and during the fall semester of 2020-2021. all students of the educational component who entered KhNMU passed the distance course "Academic Integrity", after completing which they passed the control of mastering the material and received the appropriate certificate.

Taking distance courses on academic integrity in the spring semester of 2020-2021. is planned for all applicants of higher education in the senior year of the KhNMU.

The need to comply with the code of academic integrity is stipulated in the contract of every student of higher education of the KhNMU and in the additional agreement to the employment contract of every scientific and pedagogical employee of the KhNMU.

6. RECOMMENDED LITERATURE

Basic

1. Occupational diseases / VA Kapustnyk, IF Kostyuk, GO Bondarenko and others. ; for order. prof. VA Kapustnik, prof. IF Kostyuk. -5th ed., Reworked. and add. –K. : VCB «Медицина», 2017. –536 с.
2. Occupational diseases / VA Kapustnyk, IF Kostyuk, GO Bondarenko and others. ; for order. prof. VA Kapustnik, prof. IF Kostyuk. –4th ed., Reworked. and add. –K. : VCB «Медицина», 2015. –536 с

3. Occupational diseases / VS Weaver. - Kyiv: State Enterprise "Information and Analytical Agency", 2011. - 895 p.

4. Occupational diseases / VA Kapustnik, IF Kostyuk, GA Bondarenko, etc .; under ed. prof. VA Kapustnik, prof. IF Kostyuk. –К. : ВСИ «Медицина», 2012. –504 с.

Auxiliary

5. Current occupational and environmental medicine / J. LaDou, R. Harrison. – McGrawHill Medical, 2014. –864 p.

6. A practical approach to occupational and environmental medicine / R. J. McCunney, P. P. Rountree, C. S. Barbanel [et al.] –3rd edition. –Lippincott Williams & Wilkins, 2003. – 912 p.

INFORMATION RESOURCES

1. Сторінка освітнього компоненту на платформі MOODLE — <https://distance.knmu.edu.ua/course/view.php?id=5283>

2. Міністерство охорони здоров'я України — <http://www.moz.gov.ua>.

3. Всесвітня організація охорони здоров'я — <http://www.euro.who.int>.

4. Світова федерація українських лікарських асоціацій — <http://sfult.org>.

5. Репозитарій ХНМУ (<http://repo.knmu.edu.ua/>) та бібліотека ХНМУ

(<http://libr.knmu.edu.ua/>).