

MINISTRY OF HEALTH OF UKRAINE

KHARKIV NATIONAL MEDICAL UNIVERSITY

Propedeutics of Internal Medicine No. 2 and Nursing

Academic year 2024-2025

## SYLLABUS OF THE EDUCATIONAL COMPONENT

**"Laboratory basics. Interpretation of examination results»**

**Elective educational component**

**The format of the educational component is full-time**

**Branch of knowledge 22 "Health care"**

**Specialty "223" Nursing"**

**Educational and professional program "Nursing"**

**First (bachelor) level of higher education**

**Course Fourth (four years of study)**

The syllabus of the educational component was considered at the meeting of the Department of Propedeutics of Internal Medicine No. 2 and Nursing

Protocol of  
June 14, 2022 No. 11

Acting Head of the Department

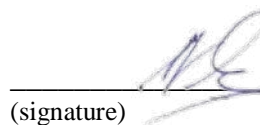


Associate Prof. Pionova O. M.  
(signature) (surname and initials)

Approved by methodical commission of KhNMU on problems of the therapeutic profile

Protocol of  
August 25, 2022 No. 1

Head of commission



Professor Kravchun P.P.  
(signature) (surname and initials)

**DEVELOPERS OF THE SYLLABUS:**

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## INFORMATION ABOUT TEACHERS OF THE EDUCATIONAL COMPONENT

Surname, first name, patronymic, position, academic title, scientific degree

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Information about consultations Face-to-face consultations: according to the department's schedule based on the department - regional clinical hospital by the prior agreement. Online consultations: by prior appointment by agreement with the teacher using the resources of the Moodle system (<http://31.128.79.157:8083/login/index.php>)

Location Venue of lectures and practical classes: lecture hall and classrooms of the department of propaedeutics of internal medicine No. 2 and nursing (Nezalezhnosti Ave, 13)

Time of classes: Monday, Tuesday, Wednesday, Thursday, Friday (9:00-11:50/13:20-17%10 according to the schedule);

## INTRODUCTION

**Syllabus of the educational component** "Laboratory basics. Interpretation of examination results " compiled in accordance with the educational and professional program (hereinafter referred to as "Nursing") and the Standard of Higher Education of Ukraine (hereinafter referred to as the Standard), first (bachelor's) level, field of knowledge 22 "Health Care", specialty "Nursing »

Laboratory studies are an integral part of the diagnostic process. An objective assessment of the composition and properties of biological material forms differential diagnostic criteria, individual signs of the pathological process, contributes to the development of correct treatment tactics and controls the effectiveness of treatment. Clinical laboratory diagnostics, as an independent clinical discipline, studies the diagnostic informativeness of laboratory symptoms and syndromes and is a component of a single process based on clinical thinking.

The main task of the educational component is the assimilation of theoretical knowledge and the acquisition of practical skills in modern laboratory research when establishing and verifying the diagnosis of patients with the most common diseases, carrying out an objective assessment of the state of health, conducting disease diagnostics, monitoring the effectiveness of treatment, further forecasting the course of the disease and quality life.

**Subject** of the educational component "Laboratory basics. Interpretation of examination results " is a targeted full complex of laboratory-instrumental studies of relevant parameters in biological materials and at the system level to assess the functional state of the body's physiological systems; solving issues related to early diagnosis of diseases, monitoring the effectiveness of treatment measures, forecasting the course and consequences of the disease.

**Pre-requisites and post-requisites:** according to the sample curriculum, study of the educational component "Laboratory basics. Interpretation of examination results ", when the student of higher education has acquired relevant knowledge of the main basic disciplines: "Human anatomy", "Medical chemistry", "Human physiology", "Pathophysiology and pathomorphology", "Fundamentals of nursing", "Biology and microbiology", " Examination and evaluation of the human condition". In turn, the educational component "Laboratory basics. Interpretation of research results" forms the basis of

study for bachelor of nursing of higher education in the next clinical discipline - clinical nursing in internal medicine, which involves "vertical" integration with these disciplines and the formation of skills to apply knowledge of the basic methods of patient examination in the process of further education and professional activity.

**Link to the educational component page in MOODLE**

<https://distance.knmu.edu.ua/course/view.php?id=4551>

## **1. THE AIM AND TASK OF THE EDUCATIONAL COMPONENT**

**1.1. The purpose of studying the educational component** "Laboratory basics. Interpretation of examination results " is the acquisition by bachelor of nursing of higher education of the principles and skills of the rational use of laboratory algorithms in various forms of pathology, the formation of stable skills in the application of laboratory diagnostic methods in the treatment and diagnostic process, and the formation of bachelor of nursing of higher education of the basics clinical thinking and the acquisition of professional competences in patient examination and assessment of health and the main manifestations of diseases of internal organs in compliance with the principles of the nursing process

**1.2. The main tasks of studying the educational component** "Laboratory basics. Interpretation of examination results " are:

Mastering a set of standards for modern laboratory diagnostics

Determination of the rules of collection and preparation of biological material for modern and objective directions of laboratory research

Performing modern laboratory testing procedures in accordance with the international rules of good laboratory practice (GLP)

Objective assessment of laboratory test results when establishing a diagnosis.

The use of laboratory research methods for monitoring during the implementation of a complex of medical measures and forecasting the course of the most common pathologies

**1.3. Competencies and learning outcomes**, the formation of which contributes to the discipline (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 educational component ensures that bachelor of nursing of higher education acquire the following competencies:

**integral:**

**Competencies and learning outcomes.**

According to the requirements of the standard, the discipline ensures the acquisition of higher education by bachelor of nursing

**competencies:**

– *integral:*

the ability to solve typical and complex specialized tasks and practical problems in professional activities in the field of health care, or in the learning process, which involves conducting research and/or implementing innovations and is characterized by complexity and uncertainty of conditions and requirements.

- *general:*

GC 01. The ability to realize one's rights and responsibilities as a member of society, to realize the values of a civil (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.

GC 02. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society,

techniques and technologies, use different types and forms 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 05. Knowledge and understanding of the subject area and understanding of professional activity

GC 06. Ability to communicate in the state language both orally and in writing

GC 07. Ability to communicate in a foreign language

GC 08. Skills in using information and communication technologies

GC 09. Determination and persistence in relation to assigned tasks and assumed duties

GC 10. Ability to make informed decisions

GC 11. Ability to work in a team

GC 12. Skills of interpersonal interaction

GC 13. Ability to act on the basis of ethical considerations

– special (professional, subject):

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

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

PC 04. Application of professional skills (skills), medical means, interventions and actions to ensure the patient/client's dignified treatment, 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 (skills), medical devices, interventions and actions to provide care based on a holistic (holistic) approach, taking into account the satisfaction of the patient's needs for comfort, nutrition, personal hygiene and the ability of the person to meet his daily needs.

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

PC 13. The ability to identify the relationship between clinical manifestations of diseases and the results of additional research methods.

**1.3.2.** The study of the educational component ensures that the student of higher education acquires the following program learning outcomes:

PLO 1. Conduct nursing subjective and objective examination of various organs and systems of the patient and evaluate the obtained data.

PLO 2. Carry out nursing diagnosis: identify and assess the patient's problems.

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

**1.3.3.** The study of the educational component ensures that bachelor of nursing of higher education acquire the following social skills (soft skills):

- Communication skills
- Ability to work in a team, communicate with people and manage conflicts
- Ability to assess and analyze situations
- Ability to organize, plan and effectively execute projects and tasks
- Ability to perform work professionally and responsibly
- The ability to demonstrate emotional intelligence in interactions with colleagues, clients, with the manager, a sense of tact and timeliness of reaction.

## **2. INFORMATION VOLUME OF THE EDUCATIONAL COMPONENT**

## 2.1 Description of the educational component

Name of indicators	Branch of knowledge, specialty and education level, EPP	Characteristics of the educational component
		<b>Full-time education</b>
The number of credits is 3	Training direction 22 "Health"	<b>Elective</b>
The total number of hours is 90	Specialty: <u>223 "Nursing"</u>	<b>Year of training:</b>
		4th
		<b>Semester</b>
		7th or 8th
Hours for full-time study: class - 34 independent student work -56	Education level: bachelor	<b>Lectures</b>
		4 p.m.
		<b>Practical</b>
		6 p.m.
		<b>Independent work</b>
		56 hours
		Individual tasks.
		Type of control: credit

### 2.2.1 Lectures

No	Topic name	Number hours	Type of lecture
1	History of development and current state of laboratory work. Types of laboratory research. Rules for writing directions for various types of analyses. The concept of the clinical minimum of laboratory tests.	2	Thematic
2	Hematological research methods, their diagnostic significance. Study of general blood analysis	2	Thematic
3	The role of biochemical research of blood in the diagnosis of diseases of internal organs.	2	Thematic
4	The role of laboratory examination of urine in the diagnosis of diseases of the kidneys and urinary tract	2	Thematic
5	Laboratory methods of research of diseases of the gastrointestinal tract	2	Thematic
6	Research of sputum, transudates and exudates. Their diagnostic value	2	Thematic
7	Laboratory methods of research of infectious and parasitic diseases	2	Thematic
8	The role of immunological, cytological and histological studies in private laboratory diagnostics	2	Thematic
Total lecture hours		16	

### 2.2.2 Seminar classes are not included in the program

### 2.2.3 Practical classes

No	Topic name	Number hours	Teaching methods	Forms of control
1	Laboratory medicine: history, current state,	2	story-explanation,	oral survey (individual and

	prospects		conversation, demonstration, presentation, video clips, video films, discussion, round table, business, role-playing, simulation game, simulation of processes and situations, delegation of authority, case method, debate, sparring-partnership (study in pairs),	face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; self-control; report; declamation
2	Study of general blood analysis. Interpretation of the obtained results. Diagnosis of anemia, leukemia.	2	story-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business, role-playing, simulation game, simulation of processes and situations, delegation of authority, case method, debate, sparring-partnership (study in pairs),	oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; self-control; report; declamation
3	Study of biochemical analysis of blood. Interpretation of the obtained results	2	story-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business, role-playing, simulation game, simulation of processes and situations,	oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; self-control; report; declamation

			delegation of authority, case method, debate, sparring-partnership (study in pairs),	
4	Studies of clinical analysis of urine. Interpretation of the obtained results.	2	story-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business, role-playing, simulation game, simulation of processes and situations, delegation of authority, case method, debate, sparring-partnership (study in pairs),	oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; self-control; report; declamation
5	Laboratory methods of investigation of sputum and transudates, exudates, cerebrospinal fluid. Interpretation of the obtained results.	2	-<<-	-<<-
6	Bacteriological research of biological material. Diagnosis of infectious processes in the body	2	-<<-	-<<-
7	Laboratory methods for researching the contents of the gastrointestinal tract	2	-<<-	-<<-
8	The role of immunological, cytological and histological studies in timely laboratory diagnosis	2	-<<-	-<<-
9	Credit class	2	-<<-	oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks;
	Hours in general	18		

#### 2.2.4. Laboratory classes are not included in the program

#### 2.2.5. Independent work

No s/p	Topic name	Number hours	Teaching methods	Forms of control
1	Modern aspects of laboratory diagnostics of viral hepatitis	4	Videos, video films, independent	abstracts; annotations; self-control; report; declamation



			work with information sources.	
2	Modern biochemical markers in cardiology	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
3	Laboratory studies of the hemostasis system	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
4	Laboratory studies of the endocrine system	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
5	Immunohematological studies	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
6	Exchange of porphyrins in normal and pathological conditions	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
7	Laboratory studies of fluids from serous cavities	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
8	Urgent laboratory analysis	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
9	Modern biochemical markers in oncology	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
10	Laboratory diagnosis of allergic diseases	4	Videos, video films,	abstracts; annotations; self-

			independent work with information sources.	control; report; declamation
11	The role of PRL in the diagnosis of infectious diseases	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
12	Laboratory study of electrolyte metabolism	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
13	Laboratory study of the acid-alkaline state	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
14	Laboratory markers of autoimmune diseases	4	Videos, video films, independent work with information sources.	abstracts; annotations; self-control; report; declamation
	Hours in general	56		

**Teaching methods (indicate only those that are used during the teaching of the discipline):** lecture, story-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business, role-playing, simulation game, simulation of processes and situations, delegation of authority, case method, debate, sparring-partnership (study in pairs) ,

**Control methods:**

*Current control:* oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; self-control; report; declamation;

*Final control:* Test

**3. EVALUATION CRITERIA**

**3.1.**The evaluation of the educational success of education seekers is carried out on the basis of the current "Instructions for the evaluation of the educational activity of education seekers of the KhNMU"

**Organization of assessment of current control.** Mastery of the topic (current control) is monitored in a practical session according to specific goals. The following tools are used to assess the level of training of bachelor of nursing of higher education: solving situational problems, interpreting and evaluating the results of laboratory studies, analyzing and evaluating the results of instrumental studies and parameters characterizing the functions of the human body, monitoring the acquisition of practical skills. The final class (FC) must be held according to the program of the educational component during the semester according to the schedule, during classes. Admission of bachelor of nursing is carried out by the teacher of the academic group. Evaluation is carried out according to the traditional 4-point system: "excellent", "good", "satisfactory" and "unsatisfactory".

**Criteria for evaluating the results of educational activities  
bachelor of nursing of education in disciplines**

<b>Rating</b>	<b>Evaluation criteria</b>
"Perfectly"	the student of higher education shows special creative abilities, knows how to acquire knowledge independently, finds and processes the necessary information without the help of a teacher, knows how to use the acquired knowledge and skills to make decisions in non-standard situations, convincingly argues answers, independently reveals his own gifts and inclinations
"Very good"	the student of higher education has a fluent command of the studied amount of material, applies it in practice, freely solves exercises and problems in standard situations, independently corrects the mistakes made, the number of which is insignificant
"Fine"	the student of higher education knows how to compare, generalize, and systematize information under the guidance of a teacher; in general, independently apply it in practice; control one's own activities; to correct errors, including significant ones, to select arguments to support opinions
"Satisfactorily"	the student of higher education reproduces a significant part of the theoretical material, demonstrates knowledge and understanding of the main provisions; with the help of the teacher, he can analyze the educational material, correct errors, among which there are a significant number of significant ones
"Enough"	the student of higher education possesses educational material at a level higher than the elementary one, reproduces a significant part of it at the reproductive level
"Unsatisfactorily" with the possibility of retaking the semester control	the student of higher education possesses the material at the level of individual fragments, which constitute a small part of the educational material
"Unsatisfactorily" with mandatory repeated study of credit	the student of higher education possesses the material at the level of elementary recognition and reproduction of individual facts, elements, objects
In particular, the criteria for evaluating practical skills in disciplines	
"Perfectly"	the applicant of higher education corresponds to a high (creative) level of competence: the applicant of higher education shows special creative abilities, independently demonstrates the implementation of practical skills without errors and possesses systematic theoretical knowledge (knows the method of performing practical skills, indications and contraindications, possible complications, etc.) and has the ability to make decisions in non-standard situations.
"Fine"	the student of higher education independently demonstrates the implementation of practical skills, admitting some inaccuracies, which he quickly corrects, possesses theoretical knowledge (knows the methodology of performing practical skills, indications and contraindications, possible complications, etc.)

"Satisfactorily"	the student of higher education demonstrates the performance of practical skills, making some mistakes that can be corrected when corrected by the teacher, possesses satisfactory theoretical knowledge (knows the basic provisions of the methodology for performing practical skills, indications and contraindications, possible complications, etc.).
"Unsatisfactorily"	the student of higher education cannot independently demonstrate practical skills (performs them, making gross mistakes), does not possess a sufficient level of theoretical knowledge (does not know the methodology of performing practical skills, indications and contraindications, possible complications, etc.).

Recalculation of the average grade for the current educational activity into a multi-point scale is carried out in accordance with the "Instructions for evaluating the educational activity of bachelor of nursing" or the average grade (to the nearest hundredth) for the teacher with the help of the ASU electronic journal automatically obtains ED.

Recalculation of the average grade for the current activity into 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	Less3	Insufficient
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

The maximum number of points that a student of higher education can score for studying a discipline is 200 points, the minimum number of points is 120, which is the basis for enrolling in a discipline. a student of higher education who has completed the study of the discipline is marked "credited" in the record book, and points from 120 to 200 and "credited" are issued in the report.

**Assessment of independent work of higher education bachelor of nursing.** The independent work of bachelor of nursing, which is provided for by the topic of the lesson along with the classroom work, is evaluated during the current control of the topic in the corresponding lesson and during the differential assessment.

**Assessment of individual tasks of a student of higher education** is carried out under the conditions of the performance of the teacher's tasks (report of an abstract at a practical session, a report with a presentation at a practical session, a report at scientific and practical conferences of the department, university, writing theses, articles, participation in the All-Ukrainian Olympiad). Points (up to 10) are added as incentives. Total points for current educational activity cannot exceed 200 points.

Performing one of the types of work:

- Conducting an examination of a demonstrative patient, and demonstrating the skills of using the analysis of laboratory examinations and preparing a review of the scientific literature on the case under study
- Preparation of a literature review according to one of the proposed for independent work

### **3.2. A list of questions for credit from the educational component**

#### **"Laboratory basics. Interpretation of examination results "**

1. Modern state of laboratory medicine.
2. The importance of laboratory medicine in clinical practice.
3. Profiles of laboratory studies.
4. History of laboratory medicine.
5. Modern technologies of laboratory medicine.
6. Prospects for the development of laboratory medicine.
7. Time and conditions of transportation of samples of biological material.
8. Criteria for refusal of laboratory acceptance of biomaterial for research.
9. The doctrine of hematopoiesis. Modern scheme of hematopoiesis.
10. Physiological role of formed elements of blood.
11. Normal leukocytogram of an adult.
12. Peculiarities of operation of automatic hematological analyzers.
13. Hemogram from automatic hematological analyzers.
14. Erythrocyte parameters.
15. Platelet parameters.
16. Leukocyte parameters.
17. Clinical and diagnostic value of determination of erythrocytes.
18. Clinical and diagnostic value of hemoglobin determination.
19. Clinical and diagnostic value of determination of reticulocytes.
20. Clinical and diagnostic value of hematocrit determination.
21. The clinical and diagnostic value of determining the color index.
22. Clinical and diagnostic value of platelet determination.
23. Clinical and diagnostic value of leukocyte determination.
24. Leukocyte formula in pathology.
25. Changes in leukocyte morphology.
26. The clinical and diagnostic value of ESR determination.
27. Clinical and laboratory diagnosis of iron deficiency anemia.
28. Clinical and laboratory diagnosis of B12 deficiency anemia.

29. Clinical and laboratory diagnosis of hemolytic anemia.
30. Clinical and laboratory diagnosis of acute leukemia.
31. Clinical and laboratory diagnosis of chronic lymphocytic leukemia.
32. Clinical and laboratory diagnosis of chronic myelogenous leukemia.
33. Mechanism of urine formation.
34. Characteristics and prevalence of certain syndromes of kidney lesions.
35. Peculiarities of urine collection for research.
36. Physical properties of urine.
37. Chemical properties of urine.
38. Microscopy of urine sediment.
39. General analysis of urine.
40. Biochemical tests for kidney pathologies.
41. Urine analysis according to Nechiporenko.
42. Analysis of urine according to Zimnyskiy.
43. Three-glass sample.
44. Rehberg's test.
45. Clinical and laboratory diagnosis of glomerulonephritis.
46. Clinical and laboratory diagnosis of pyelonephritis.
47. Clinical and laboratory diagnosis of urolithiasis.
48. Biochemical analysis of blood
49. Study of sputum
50. Study of transudate and exudate
51. Methods of diagnosis of infectious diseases
52. Clinical and laboratory diagnosis of respiratory diseases.
53. Clinical and laboratory diagnosis of diseases of the cardiovascular system
54. Clinical and laboratory diagnosis of diseases of the gastrointestinal tract.
55. Clinical and laboratory diagnosis of diseases of the endocrine system.
56. Laboratory diagnosis of allergic diseases

**3.3. Control questions and tasks for independent work** Mastery of topics that are presented only for independent work is checked during the credit class.

The basic list of types of independent work of higher education applicants, developed in accordance with the structure of the educational component. At the same time, tasks for independent work are:

- Modern aspects of laboratory diagnostics of viral hepatitis
- Modern biochemical markers in cardiology
- Laboratory studies of the hemostasis system
- Laboratory studies of the endocrine system
- Immunohematological studies
- Exchange of porphyrins in normal and pathological conditions
- Laboratory studies of fluids from serous cavities
- Urgent laboratory analysis
- Modern biochemical markers in oncology
- Laboratory diagnosis of allergic diseases
- The role of PRL in the diagnosis of infectious diseases
- Laboratory study of electrolyte metabolism
- Laboratory investigation of electrolyte exchange
- Laboratory study of the acid-alkaline state
- Laboratory markers of autoimmune diseases

**3.4. Individual tasks** (the list with the determination of the number of points for their performance, which can be added as incentives) was approved at the department meeting:

At the request of the bachelor of nursing , during the study of relevant topics, he can perform

individual work, which is carried out outside of class time and, upon successful completion, is additionally evaluated by the teacher.

**3.5. Other incentives** (conditions for awarding additional points for various types of informal and informal activities, which may include conferences, scientific research, participation in surveys, symposia, etc.):

At the meeting of the department, a list of individual tasks was approved (participation with reports in conferences, professional Olympiads, preparation of analytical reviews with presentations with a plagiarism check) with the determination of the number of points for their performance, which can be added as incentives (no more than 10)

Points for individual tasks are awarded to the student of higher education once only by commission (commission - head of the department, head teacher, teacher of the group) only under the conditions of their successful completion and defense. In no case can the total sum of points for ED exceed 120 points.

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

In accordance with the general regulations and orders of the KhNMU

## **4. POLICY OF DISCIPLINE**

Educational component requirements (the system of requirements and rules that the teacher presents to bachelor of nursing of higher education when studying the educational component). In order to achieve the learning goals and successfully complete the course, it is necessary: to join the work from the first day; regularly attend lectures; read the material in advance, before considering it in a practical session; not to be late or miss classes; come to the department dressed in a medical gown, have a change of shoes, have a stethoscope, a notebook, and a pen with you; perform all the necessary tasks and work every day; be able to work with a partner or as part of a group; ask for help and get it when you need it. Written and homework assignments must be completed in full and on time.

Academic mobility, interchangeability of credits (volume of 1 credit 30 hours) is provided. bachelor of nursing of higher education can discuss various tasks, but their implementation is strictly individual.

Attendance and behavior Attending lectures and practical classes by bachelor of nursing of higher education is mandatory. bachelor of nursing of higher education are not allowed to be late for lectures and practical classes.

During the lecture class, bachelor of nursing of higher education are recommended to keep a summary of the class and maintain a sufficient level of silence. Asking questions to the lecturer is absolutely normal.

Use of electronic gadget allowed only with permission of the teacher. Copying, use of various software tools, hints, use of a mobile phone, tablet or other electronic gadgets during class are not allowed.

Recommendations for successful completion of the discipline (activity of bachelor of nursing of higher education during practical classes, performance of the required minimum of educational work). Practical classes include:

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

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

A creative approach in its various manifestations is welcome. Applicants of higher education are

expected to be interested in participating in city, all-Ukrainian and international conferences, competitions and other events related to the subject profile.

Incentives and penalties (additional points for conferences, research, editing, advice, participation in surveys). Assessment of individual tasks of a student of higher education is carried out under the conditions of the performance of the teacher's tasks (report of an abstract at a practical session, a report with a presentation at a practical session, a report at scientific and practical conferences of the department, university, writing theses, articles, participation in the All-Ukrainian Olympiad). Points (up to 10) are added as incentives.

Safety equipment. At the first lesson of the course, the basic principles of labor protection will be explained by means of appropriate instruction. Everyone is expected to know where the nearest exit to the audience is, where the fire extinguisher is, how to use it, etc.

The procedure for informing about changes in the syllabus etc. The development, updating and approval of the syllabus of the educational component is carried out every academic year. Mandatory placement on the website of KhNMU in the profile of the "Medicine" educational program by June 30 of the current academic year for the next academic year;

## **5. ACADEMIC INTEGRITY**

Academic Integrity Policy (including responsibility for violations of academic integrity). Observance of academic integrity by bachelor of nursing of education involves:

- ✓ Independent performance of educational tasks, tasks of current and final control of learning results (for persons with special educational needs, this requirement is applied taking into account their individual needs and capabilities);
- ✓ Links to sources of information in the case of using ideas, developments, statements, information;
- ✓ Compliance with the norms of the legislation on copyright and related rights;
- ✓ Providing reliable information about the results of one's own (scientific, creative) activities, used research methods and sources of information.

The department of propaedeutics of internal medicine No. 2 and nursing supports zero tolerance for plagiarism. A desire to constantly improve one's own awareness in academic writing is expected from the student of higher education. In the first classes, information activities will be held on what exactly is considered plagiarism and how to correctly conduct a research and scientific search.

Policy regarding persons with special educational needs. Bachelor of nursing with special needs must meet with the teacher or notify him before the start of classes, at the request of the student of higher education; the head of the group can do this.

## **6. RECOMMENDED LITERATURE**

### **BASIC (MAIN):**

1. Clinical biochemistry / Textbook / in general. edited by H.G. Lunyova. - K.: Atika, 2013. - 1156 p.
2. Clinical laboratory diagnostics. Workshop (3rd edition) / L.E. Lapovets, B.D. Lutsyk, G.B. Lebed, L.E. Porohnavets, O.O. Yastremska, O.Yu. Andrushevskaya, I.P. Kokodyniak, G.V. Maksymyuk, V.M. Akimova, N.D. Boykiv, A.S. Kost, Z.Ya. Lavro. - Lviv, 2011. - 252 p.
3. A. A. Kishkun. Guide to laboratory diagnostic methods / A. A. Kishkun. –"GEOTAR-Media" Moscow, 2007. - 779 with.
4. Clinical laboratory diagnostics: national manual: in 2 vols. – Vol. 1./ under the editorship. V.V. Dolgova, V.V. Menshikova - M.: GEOTAR-Media, 2012.

### **AUXILIARY:**

1. Clinical laboratory diagnostics by Ed. B.D. Lutsika / B.D. Lutsyk, L.E. Lapovets, G.B. Lebed, V.M. Akimov. - Kyiv: Medicine, 2011. - 288 p.
2. Methods of clinical laboratory studies / sub. ed. Prof. V. S. Kamyshnikova. - 4th ed. - M.: MEDpress-inform, 2011. - 750 p.



3. Clinical biochemistry/ Editor: S. Angelski, M.G. Dominichak, Z. Yakubovski. "Persey" publishing house. Poland. - 2000. - 445 p.

#### **INFORMATION RESOURCES:**

1. <http://moodle.tdmu.edu.ua/course/view.php?id=2298>
2. Electronic manual "What a clinician needs to know for the interpretation of laboratory tests" L. V. Natrus, A. V. Melnyk, I. A. Shramko, Donetsk - 2011. site:[http://www.clindialab.dsmu.edu.ua/uch\\_posobie.html](http://www.clindialab.dsmu.edu.ua/uch_posobie.html)