

MINISTRY OF HEALTH OF UKRAINE  
KHARKIV NATIONAL MEDICAL UNIVERSITY

Department of Clinical Pharmacology and Internal Medicine  
Academic year 2024-2025

**SYLLABUS OF THE EDUCATIONAL COMPONENT**

“Nursing in cardiology”  
(name of educational component)

Elective educational component

Form of education full-time  
(full-time; part-time; remote)

Area of study 22 “Health care”  
(code and name of area of study)

Specialty 223 “Nursing”  
(code and name of specialty)

Specialization

Educational and professional program “Nursing”

First bachelor’s level of higher education

Course 4 (4 years of study)

The syllabus of the educational component was considered at the meeting of the Department of Clinical Pharmacology and Internal Medicine

Approved by the Methodical Commission of KhNMU on the issues of professional training of disciplines of therapeutic profile

Protocol as of August 28, 2023 No. 1

Protocol as of August 30, 2023 No. 1

Head of Department



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(initials, surname)

Head



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## **DEVELOPERS OF THE SYLLABUS:**

1. Iryna Ivanivna Kniazkova – Head of the Department of Clinical Pharmacology and Internal Medicine, Doctor of Medical Sciences, Professor.
2. Oleksandr Mykolaiovych Bilovol – Academician of the National Academy of Sciences of Ukraine, Professor of the Department of Clinical Pharmacology and Internal Medicine, Doctor of Medical Sciences, Professor.
3. Inna Pavlivna Dunaieva – Doctor of Medical Sciences, Associate Professor of the Department of Clinical Pharmacology and Internal Medicine.
4. Iryna Anatoliivna Ilchenko – Doctor of Medical Sciences, Associate Professor of the Department of Clinical Pharmacology and Internal Medicine.
5. Dmytro Volodymyrovych Molodan – Assistant of the Department, Candidate of Medical Sciences.

## DATA ON TEACHERS WHO DELIVER THE EDUCATIONAL COMPONENT

Full name	Contact telephone	E-mail:	Address of the Department	Classes schedule	Consultations
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Place carrying out practical classes: educational rooms department of clinical pharmacology and internal medicine of medicine on base DU "National institute therapy named after L.T. Maloi National Academy of Sciences of Ukraine" (L.T. Maloi Ave. 2A, Kharkiv).

## INTRODUCTION

**The syllabus of the educational component** “Nursing in cardiology” is compiled in accordance with the educational and professional program (hereinafter referred to as the “EPP”) and the Standard of Higher Education of Ukraine (hereinafter – the Standard), first (Bachelor’s) level, area of study 22 “Health care”, specialty 223 “Nursing”.

**Description of the educational component (abstract)** “Nursing in cardiology” is one of the main clinical educational components of Bachelor’s training in the specialty “Nursing”. During the study of the educational component, applicants learn the basic methods of cardiovascular disease (CVD) diagnosis, treatment and prevention. Thus, “Nursing in cardiology” is a clinical educational component that studies the main causes and mechanisms of the development of CVD, its main symptoms and syndromes, features of the course, methods and significance of additional research, modern methods of treatment and prevention of diseases.

The organization of the educational process is carried out according to the requirements of the European credit transfer and accumulation system, based on a combination of learning technologies by sections and assessment credits – units of measurement of student’s educational load, necessary for mastering a discipline or its section.

**The subject** of study of the educational discipline “Nursing in cardiology” is a set of theoretical and practical questions that contribute to students’ assimilation of the main causes of CVD, mechanisms of disease development, basic examination methods, principles of treatment according to protocols and prevention of the most common CVD.

**The purpose** of teaching the educational component “Nursing in cardiology” is the formation in applicants of the basics of clinical thinking and acquisition of professional competences in examining a patient, establishing a diagnosis of CVD, prescribing examination and treatment, observing the principles of medical ethics and deontology.

**Interdisciplinary connections:** according to the study plan of the academic discipline “Nursing in cardiology” in the 3rd semester, when a student already has relevant knowledge after studying in a medical college and in the Bachelor’s degree in the main basic disciplines (prerequisites): medical biology, medical and biological physics, human anatomy, physiology, biological and bioorganic chemistry, medical chemistry, histology, cytology and embryology, microbiology, virology and immunology; has skills in examination and assessment of human health, clinical pharmacology and toxicology, with which the clinical nursing program is integrated. The discipline “Nursing in cardiology” forms in an applicant the skills of establishing a clinical diagnosis, prescribing examination and treatment and methods of prevention of CVD, forms the ability to apply the acquired knowledge in professional activities.

## **1. PURPOSE AND OBJECTIVES OF THE EDUCATIONAL COMPONENT**

- 1.1. **The purpose of studying the educational component** “Nursing in cardiology” is the formation in students of the basics of clinical thinking and the acquisition of professional competences in examining a patient and

establishing a diagnosis of CVD, prescribing treatment and carrying out preventive measures for the occurrence of diseases.

1.2. **The main tasks** of studying the educational component “Nursing in cardiology” are:

- Students acquire the theoretical knowledge necessary for the detection of CVD.
- Understanding the main causes and mechanisms of CVD development.
- Mastering general methodical approaches when examining a patient with CVD.
- Mastering by students of basic practical skills and methods of additional CVD examinations.
- Diagnosis of the main CVDs in their typical course.
- Mastering the basic principles of treatment and prevention of the most common CVDs.
- Formation of moral, ethical and deontological qualities when communicating with patients and their relatives.

1.3. **Competencies and learning outcomes**, the formation of which contributes to the discipline “Nursing in cardiology” (interrelationship 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 discipline ensures that applicants acquire the following **competencies**:

**integral:** a Bachelor of Nursing is able to solve complex specialized tasks and practical issues in the field of Nursing or in the process of learning, which involves the application of certain theories and methods of the relevant science and is characterized by the complexity and uncertainty of conditions.

**general:**

GC 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, technique and technologies, to use various types and forms of motor activity for active recreation and leading a healthy lifestyle.

GC 03. Ability to abstract thinking, analysis and synthesis

GC 04. Ability to apply knowledge in practical situations

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

GC 10. Ability to make reasoned decisions

GC 11. Ability to work in a team.

GC 12. Interpersonal skills.

**special (professional, subject):**

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

PC 02. 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 03. Ability to satisfy the needs of a patient/client throughout the life span (including the dying process) by planning, assisting and implementing nursing interventions, evaluating and modifying individual care plans created in collaboration with a patient/client, caregivers, family members and other medical and social workers.

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

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

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

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

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

PC 14. Ability to organize and provide emergency care in various acute conditions.

PC 15. Ability to organize and provide emergency assistance in emergency situations in peacetime and wartime.

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

PLO 1. Conduct nursing subjective and objective examination of various organs and systems of a patient and evaluate the obtained data. In the conditions of health care institutions and at home, by communicating with patients of different age groups, their relatives or close friends of a sick child and their parents, be able to collect complaints, disease history, life history, allergic history, epidemiological history, evaluate medical history data and conduct an objective examination.

PLO 2. Conduct nursing diagnosis: identify and assess patient problems. In the conditions of health care facilities, at home, under predictable circumstances, to

be able to identify the real problems of a patient, assess their priority and establish a nursing diagnosis.

PLO 3. Plan nursing interventions. In the conditions of health care facilities, at home and under unforeseen circumstances, be able to make a plan of nursing interventions to solve real and related problems of patients of various ages.

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 staff on the performance of functional duties and occupational health and safety; monitor compliance with safety rules by junior medical staff; - 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 facilities, in order to implement organizational and management competencies, to be able to: - make management decisions, ensure their implementation based on the application of nursing management models; - ensure the implementation of orders and resolutions on health protection issues; - master the functional duties of the head of nursing services; - know the procedure for licensing and accreditation of medical and preventive facilities, laboratories of various profiles, etc.

PLO 6. To ensure a healthy microclimate in a 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 and members of their family or close environment, medical staff; - solve ethical and deontological problems in the process of working with a patient and their family members; consider and analyze professional mistakes in a team; conduct training for junior and technical staff.

PLO 7. Participate in monitoring of healthy and sick population, rehabilitation and dispensary supervision. In the conditions of health care facilities, at home and in the community, using the current orders of the Ministry of Health of Ukraine, in order to form, preserve and improve the health of the adult and children's population, be able to: - keep records of dispensary groups of the population; - calculate and analyze statistical indicators of dispensation efficiency; - conduct explanatory work among patients of different dispensary groups; - keep records of health groups; - calculate and evaluate individual indicators and indicators of the complex effect of the microclimate on a human body; - determine the stages of medical and social rehabilitation of a patient, tasks for each stage; - form 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. Perform medical manipulations in order to ensure a sanitary and anti-epidemic regime.

PLO 12. Perform medical manipulations properly in order to take measures to stabilize the functional state of a body.

PLO 14. Be able to prepare a patient, collect and direct biological material for laboratory and instrumental research.

PLO 16. Ability to be accurate in performing interdependent nursing functions.

PLO 20. Keep appropriate medical records.

**1.3.3.** The study of the educational component ensures that applicants acquire the following **soft skills**:

- ability to abstract thinking, analysis and synthesis;
- ability to learn and master modern knowledge;
- ability to apply knowledge in practical situations;
- knowledge and understanding of the subject area and understanding of professional activity;
- ability to adapt and act in a new situation;
- ability to make reasonable decisions;
- ability to work in a team; interpersonal skills;
- ability to communicate in the state language both orally and in writing;
- ability to communicate in a foreign language; skills in using information and communication technologies; determination and persistence in relation to assigned tasks and assumed duties;
- ability to act socially responsibly and consciously; desire to preserve the environment;
- ability to act on the basis of ethical considerations (motives).

## 2. INFORMATION VOLUME OF THE EDUCATIONAL COMPONENT

Name of indicators	Field of knowledge, specialty, educational and qualification level, EPP	Characteristics of the academic discipline	
		<b>full-time studying</b>	
Number of credits – 3.0	Training direction 22 Health care	Selective	
Total number of hours – 90	Specialty: 223 “Nursing”	<b>Year of training:</b>	
		4-th	-
		<b>Semester</b>	
		-rd or -	-
Hours for full-time (or part-time) studying: classroom – 34 of independent student’s work – 56	EPP: Nursing. Educational and qualification level: first (Bachelor) level	<b>Lectures</b>	
		0	hours
		<b>Practical, seminar</b>	
		34	hours
		<b>Laboratory</b>	
		0	hours
		<b>Independent work</b>	
56	hours		
		<b>Individual tasks: hours</b>	



		Type of control: Credit
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### 2.2.1 Lectures are not included in the program

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

### 2.2.3 Practical classes

No	Topic name	Number of Hours	Teaching methods	Forms of control
1	Topic 1. Cardiovascular diseases in the structure of diseases of internal organs (relevance, prevalence, causes, clinical manifestations, complications, methods of diagnosis and treatment, prevention)	4	Narrative-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business role-playing, simulation game, simulation of processes and situations, delegation of authority, ECS method, debate, sparring-partnership (training in pairs)	Oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; report; declamation
2.	Topic 2. Organization of the nursing process for patients suffering from arterial hypertension (clinical examination, tactics of the nurse's actions)	4	Narrative-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business role-playing, simulation game, simulation of processes and	Oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; report; declamation

			situations, delegation of authority, ECS method, debate, sparring-partnership (training in pairs)	
3	Topic 3. Organization of the nursing process for patients suffering from coronary heart disease (clinical examination, tactics of the nurse's actions)	4	Narrative-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business role-playing, simulation game, simulation of processes and situations, delegation of authority, ECS method, debate, sparring-partnership (training in pairs)	Oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; report; declamation
4	Topic 4. Organization of the nursing process for patients suffering from acute coronary syndrome, myocardial infarction (clinical examination, tactics of the nurse's actions)	4	Narrative-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; report; declamation

			delegation of authority, ECS method, debate, sparring-partnership (training in pairs)	
5	Topic 5. Organization of the nursing process for patients suffering from heart rhythm and conduction disorders (clinical examination, tactics of the nurse's actions)	4	Narrative-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business role-playing, simulation game, simulation of processes and situations, delegation of authority, ECS method, debate, sparring-partnership (training in pairs)	Oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; report; declamation
6	Topic 6. Organization of the nursing process for patients suffering from heart failure (clinical examination, tactics of the nurse's actions)	4	Narrative-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business role-playing, simulation game, simulation of processes and situations, delegation of	Oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; report; declamation

			authority, ECS method, debate, sparring-partnership (training in pairs)	
7	Topic 7. Organization of the nursing process for patients suffering from myocarditis, cardiomyopathy (clinical examination, tactics of the nurse's actions)	4	Narrative-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business role-playing, simulation game, simulation of processes and situations, delegation of authority, ECS method, debate, sparring-partnership (training in pairs)	Oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; report; declamation
8	Topic 8. Organization of the nursing process for patients suffering from infectious endocarditis (clinical examination, tactics of the nurse's actions)	4	Narrative-explanation, conversation, demonstration, presentation, video clips, video films, discussion, round table, business role-playing, simulation game, simulation of processes and situations, delegation of authority, ECS method, debate, sparring-partnership (training in pairs)	Oral survey (individual and face-to-face); written survey; test control; creative tasks; individual tasks; abstracts; annotations; mutual control; report; declamation

			method, debate, sparring- partnership (training in pairs)	
<b>9</b>	<b>Examination</b>	<b>2</b>		
<b>Total hours of practical classes</b>		<b>34</b>		

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

#### 2.2.5. Independent work

No	Topic name	Number of Hours	Teaching methods	Forms of control
1	Topic 1. Organization of the nursing process for patients with heart defects.	10	Individual (group) creative situational and practical tasks	Abstracts; report; declamation
2	Topic 2. Emergency care at hypertensive crisis. Tactics of the nurse's actions.	10	Individual (group) creative situational and practical tasks	Abstracts; report; declamation
3	Topic 3. Emergency care at heart rhythm disorders. Tactics of the nurse's actions.	10	Individual (group) creative situational and practical tasks	Abstracts; report; declamation
4	Topic 4. Emergency care at acute heart failure. Tactics of the nurse's actions.	10	Individual (group) creative situational and practical tasks	Abstracts; report; declamation
5	Topic 5. Complications and emergency care at myocardial infarction. Tactics of the nurse's actions.	10	Individual (group) creative situational and practical tasks	Abstracts; report; declamation
6	Topic 6. Anti-epidemic measures, participation of a nurse in their implementation	6	Individual (group) creative situational and practical tasks	Abstracts; report; declamation
<b>Hours in total</b>		<b>56</b>		

**Teaching methods (only those used during the teaching of the discipline are given):**

**Verbal**

Methods of educational and cognitive activity: explanatory and illustrative method, method of problem statement, partial search method, research method.

Methods of stimulation and motivation of educational and cognitive activity: inductive and deductive methods of teaching, methods of stimulation and motivation of learning.

Control methods as teaching methods (control by a teacher, self-control, mutual control, self-correction, mutual correction).

### **Visual**

Demonstration of examination of extracts from disease histories and/or appointment letters, situational cases, demonstration of illustrations, presentations, scales, tables, schemes, algorithms, methods of controlling the effectiveness and safety of drugs, demonstration of video films for practical classes, drug prospectuses according to the topic of the practical class.

### **Practical methods**

Conducting a clinical examination of 1-2 patients according to the subject of a class, evaluating the results of laboratory and instrumental examinations, drawing up and correcting the treatment plan in accordance with treatment standards, features of drug interaction (pharmacokinetic, pharmacodynamic) on the basis of a personalized approach.

### **Control methods:**

survey and verification of theoretical knowledge and practical skills,

- test control,
- situational clinically oriented tasks,
- disputes

**Organization of current control.** Teachers ensure that each student receives the necessary competence in the areas included in the topics of practical classes. Mastering of the topic (current control) is controlled at the practical class in accordance with the specific objectives. The following means of assessing the level of students' training are used: tests, solving situational problems, interpreting and evaluating the results of laboratory studies, method of prescribing therapy, monitoring the acquisition of practical skills. Evaluation of the current educational activity (CEA) at each practical class is carried out according to the traditional 4-point scale: "excellent", "good", "satisfactory" and "unsatisfactory".

*Final control* :\_examination.

## **3. EVALUATION CRITERIA**

**3.1.** Assessment of success of training of education applicants is carried out on the basis of the current "Instruction on assessment of training activity of education applicants of KhNMU"

**Organization of current control.** Mastering of the topic (current control) is controlled at the practical class in accordance with the specific objectives. The

following means of assessing the level of students' training are used: computer tests, solving situational problems, evaluating the pharmacokinetic and pharmacodynamic characteristics of drug groups, writing prescriptions for drugs, according to the topic of a class. Evaluation is carried out according to the traditional 4-point system: "excellent", "good",

"satisfactory" and "unsatisfactory". 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 students..." or the average grade (accurate to the nearest hundredth) for the CEA is automatically obtained by a teacher using the electronic journal of the ACS. The minimum number of points to be scored by a student for the current activity while studying a section is 70 points, the maximum number of points is 120 points. Only those students who do not have academic debt and have at least 70 points (the average point for the current educational activity is not less than 3.0) are admitted to the final assessment – **examination**.

**Evaluation of independent work of applicants.** Independent work of students, which is provided for by the topic of a class along with classroom work, is evaluated during the current control of a topic at the corresponding class.

**Evaluation of the individual tasks of an applicant** is carried out under the conditions of performance of the teacher's tasks (an abstract report at a practical class, a report with a presentation at a practical class, a report at scientific and practical conferences of the department, university, writing theses, articles, participation in the All-Ukrainian Olympiad ). Points (no more than 10) are added as incentives. The total number of points for the current educational activity cannot exceed 120 points.

#### **Organization of final control – examination.**

**Examination** is conducted by a teacher of an academic group at the last class in the discipline. Admission to examination is determined by CEA points, namely: min – 120 points. Examination on a discipline or its part is a process, during which the following results are checked, which were received during the course:

- level of theoretical knowledge;
- development of creative thinking;
- skills of independent work;
- competences – ability to synthesize acquired knowledge and apply it in solving practical tasks

Recalculation of the average grade for the current activity into a multi-point scale is carried out in accordance with the "Instructions for evaluating the educational activity of students..."

#### **Recalculation of the average grade for the current activity into a multi-point scale (for disciplines ending with examination)**

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	200	4.22-4.23	169	3.45-3.46	138
4.97-4.99	199	4.19-4.21	168	3.42-3.44	137
4.95-4.96	198	4.17-4.18	167	3.4-3.41	136
4.92-4.94	197	4.14-4.16	166	3.37-3.39	135
4.9-4.91	196	4.12-4.13	165	3.35-3.36	134
4.87-4.89	195	4.09-4.11	164	3.32-3.34	133
4.85-4.86	194	4.07-4.08	163	3.3-3.31	132
4.82-4.84	193	4.04-4.06	162	3.27-3.29	131
4.8-4.81	192	4.02-4.03	161	3.25-3.26	130
4.77-4.79	191	3.99-4.01	160	3.22-3.24	129
4.75-4.76	190	3.97-3.98	159	3.2-3.21	128
4.72-4.74	189	3.94-3.96	158	3.17-3.19	127
4.7-4.71	188	3.92-3.93	157	3.15-3.16	126
4.67-4.69	187	3.89-3.91	156	3.12-3.14	125
4.65-4.66	186	3.87-3.88	155	3.1-3.11	124
4.62-4.64	185	3.84-3.86	154	3.07-3.09	123
4.6-4.61	184	3.82-3.83	153	3.05-3.06	122
4.57-4.59	183	3.79-3.81	152	3.02-3.04	121
4.54-4.56	182	3.77-3.78	151	3-3.01	120
4.52-4.53	181	3.74-3.76	150	<b>Less than 3</b>	<b>Not enough</b>
4.5-4.51	180	3.72-3.73	149		
4.47-4.49	179	3.7-3.71	148		
4.45-4.46	178	3.67-3.69	147		
4.42-4.44	177	3.65-3.66	146		
4.4-4.41	176	3.62-3.64	145		
4.37-4.39	175	3.6-3.61	144		
4.35-4.36	174	3.57-3.59	143		
4.32-4.34	173	3.55-3.56	142		
4.3-4.31	172	3.52-3.54	141		
4.27-4.29	171	3.5-3.51	140		
4.24-4.26	170	3.47-3.49	139		

**Correspondence of discipline assessment in points to assessment in traditional grades**

Grade according to 200-point scale	Grade according to ECTS scale	Grade according to four-point (national) scale
180–200	A	Excellent
160–179	B	Good
150–159	C	Good
130–149	D	Satisfactory
120–129	E	Satisfactory



### **3.2. List of questions and tasks for the final control of knowledge of the educational component.**

1. Contribution of Ukrainian scientists to the development of world cardiology
2. Basic principles of human health protection in Ukraine.
3. Main clinical manifestations of cardiovascular diseases, diagnostic methods.
4. Arterial hypertension. Causes, main symptoms, diagnostic criteria, principles of treatment according to protocols, prevention.
5. Ischemic heart disease. Etiology, pathogenesis, clinical manifestations, examination, diagnostic criteria, principles of treatment according to protocols.
6. Heart failure, clinical examination, diagnosis, stages, principles of treatment according to protocols.
7. Acute coronary syndrome, myocardial infarction Definition, etiology, main clinical manifestations, examination, principles of treatment according to protocols, prevention.
8. Irregular heart rhythm. Etiology, pathomorphological changes, clinical examination, course, possible complications, diagnosis, principles of treatment according to protocols, prevention.
9. Violation of heart conduction. Definition, clinical manifestations, examination, diagnostic criteria, principles of treatment according to protocols, prevention.
10. Infectious endocarditis. Clinical examination, diagnostic criteria, principles of treatment according to protocols, prevention.
11. Myocarditis. Etiology, clinical manifestations depending on the period, clinical examination, diagnosis, principles of treatment according to protocols, prevention.
12. Cardiomyopathies. Definition, causes, clinical manifestations, examination, diagnosis, principles of treatment according to protocols, prevention.
13. Complications of myocardial infarction. Definition, causes, clinical manifestations, examination, diagnosis, principles of treatment according to protocols, prevention.
14. Hypertensive crisis. Etiology, classification, clinical examination, diagnosis, complications, principles of treatment according to protocols, specific and non-specific prevention.
15. Angina attack. Causes, clinical examination, principles of treatment according to protocols, prevention.
16. Acquired heart defects. Definition, reasons. Clinical manifestations of mitral valve insufficiency. Diagnostic criteria, principles of treatment according to protocols.
17. Mitral stenosis. Clinical examination, diagnostic criteria, principles of treatment according to protocols.
18. Insufficiency of aortic valves. Clinical manifestations, examinations, diagnostic criteria, principles of treatment according to protocols.

19. Aortic stenosis. Clinical examination, diagnostic criteria, principles of treatment according to protocols.
20. Aortic heart defects. Main clinical manifestations, diagnostic criteria, principles of treatment according to protocols.
21. Secondary hypertension. Etiology, pathogenesis, clinical manifestations, diagnostic criteria, treatment according to protocols.
22. Uncomplicated and complicated hypertensive crises, clinical manifestations, emergency care. Complication of hypertensive disease.
23. Atherosclerosis. Definition, risk factors, forms of atherosclerosis, treatment according to protocols. Non-medicinal methods of treatment of atherosclerosis. Prevention.
24. Angina, definitions, forms, functional classes of angina, clinical manifestations, diagnostic criteria, principles of treatment according to protocols, providing emergency care during an attack. Prevention.
25. Atypical forms of myocardial infarction: cerebral, asthmatic, gastralgic, painless. Clinical manifestations, differential diagnosis. Treatment according to protocols. Early and late complications of myocardial infarction. Assistance with them.
26. Acute heart failure. Cardiac asthma, pulmonary edema, causes, clinical manifestations, emergency care.
27. Acute vascular insufficiency. Fainting, collapse, shock. Causes, pathogenesis, clinical manifestations, emergency care.
28. Chronic insufficiency of blood circulation. The role of the Kyiv School of Therapists in developing the classification of heart failure. Causes, clinical manifestations, principles of treatment according to protocols.
29. Irregular heart rhythm. Sinus tachycardia, bradycardia, extrasystole, atrial fibrillation. Differential diagnosis.
30. Risk factors for cardiovascular diseases and the main directions for reducing their influence on the occurrence of diseases.

### **3.3. Control questions**

Consists of methodological recommendations for each class.

**3.4.** Individual tasks of an applicant – on a discipline (hereinafter – ITA) contribute to a more in-depth study of theoretical material by an applicant, formation of skills of using knowledge to solve relevant practical tasks.

Types of individual tasks in a certain academic discipline are determined by the curriculum of a discipline. The deadlines for receiving, completing and defending individual tasks are determined by the schedule developed by the department for each semester. ITA is performed by an applicant independently with the necessary consultations from a scientific and pedagogical worker. There are cases where several students perform ITA on a complex topic.

ITAs are evaluated in points (no more than 10), which are added to the points

obtained for the GEA after the completion of the study of a discipline or its part, during the “examination”.

The total sum of points for GEA and ITA cannot exceed 120 points. For disciplines, the form of control of which is “examination”, the sum of points for GEA and ITA cannot exceed 200 points.

#### **4. POLICY OF DISCIPLINE**

In order to achieve the learning goals and successfully complete the course, it is necessary: to get involved in the work from the first day; attend regularly, do not be late and do not miss practical classes; regularly prepare the material in advance, before considering it at a practical class; when attending practical classes, it is necessary to be dressed in a medical gown, have a change of shoes, have a notebook and a pen; perform all the necessary homework and actively work at practical classes; if necessary, ask for help and get it when it is needed.

Applicants can discuss various tasks, but their implementation is strictly individual. Copying, using of various software tools, hints, using of a mobile phone, tablet or other electronic gadgets during class are not allowed. Students are not allowed to be late for practical classes. Missed practical classes are worked out hour for hour by a teacher of the group or the faculty member on duty. Acceptance of workouts and consultations is held daily from 3:00 p.m. to 5:00 p.m., on Saturdays – in accordance with the “Regulations on the procedure of workouts by the students of classes” as of 07.12.2015 No. 415.

Students with special needs should meet with a teacher or notify them before the start of classes, the monitor of a group can do this upon student’s request. If you have any questions, please contact a teacher

#### **5. ACADEMIC INTEGRITY**

In accordance with Article 42 of the Law of Ukraine “On education” and the Law of Ukraine “On higher education”, taking into account the recommendations of the National Agency for Quality Assurance of Higher Education, which were approved by the Decision of the National Agency for Quality Assurance of Higher Education as of October 29, 2019 (Protocol No. 11), the regulatory framework on issues of academic integrity has been improved at the University. Taking into account the current legislation, we strive to ensure that the university community is directed to prevent, discourage and stop the manifestations of academic dishonesty by creating a positive, conducive and virtuous educational and scientific environment.

Order No. 305 as of 27.08.19 regarding the organization of the educational process at KhNMU Code of academic integrity of KhNMU

Order No. 165 as of 02.07.2020 on measures to develop the academic integrity system at KhNMU

Regulations on academic integrity

## **6. RECOMMENDED LITERATURE**

### **Basic**

1. Current issues of cardiology: study guide / [O.M. Bilovol, I.I. Kniazkova, N.I. Yarema, L.V. Radetska, I.P. Savchenko, O.I. Kotsiuba et al.] – 2021. – Kharkiv: KhNMU. –144 p.
2. Current issues of internal medicine (in diagrams and tables): a study guide / By the general editorship of O.M. Bilovol – Lviv: Publishing House of Novyi Svit – 2000, PE, 2022. – 340 p.
3. N.M. Kasevych - Basics of nursing in modules: study guide / N.M. Kasevych - - 3rd ed., ed. – Kyiv: All-Ukrainian Specialized Publishing House “Medytsyna”, 2018. – 478 p.
4. O.M. Kovalova - Deontology in medicine: textbook / O.M. - Kovalova, N. A. Safarhalina-Kornilova, N.M. - Herasymchuk. – 2nd ed., ed. – Kyiv: All-Ukrainian Specialized Publishing House “Medytsyna”, 2018. – 239 p.
5. A.S. Svintsitskyi - Diagnostic methods in the clinic of internal medicine: study guide / A.S. - Svintsitskyi. – Kyiv: All-Ukrainian Specialized Publishing House “Medytsyna”, 2019. – 1008 pages: illustrations, 80 colors. incl.
6. The main duties and professional actions of a nurse in a therapeutic department: study guide for teachers and students of the 3rd year of med. faculty / V. V. Syvolap, L. V. Lukashenko, O. I. Oliinyk, I. V. Lykhasenko, N. F. Avramenko, M. P. Herasko, S. P. Zhemaniuk, L. O. Kurilets, T. V. Kravchenko, S. V. Polivoda – Zaporizhzhia: ZSMU, 2017. – 112 p.  
<http://dspace.zsmu.edu.ua/handle/123456789/7560>

### **Supplementary**

1. Cardiology of children’s age: study guide / Yu.V. Marushko, T.V. Marushko and others / Ed. by Yu.V. Marushko, T.V. Marushko – Kyiv – Khmelnytskyi: Private Printing House of PI-E O.V. Stozhuk, 2018. – 528 p.
2. Nelson Textbook 21th Edition. Robert M. Kliegman, Joseph St. Geme. Publisher: Elsevier. 2019. P. 4112.
3. Nursing in internal medicine: textbook / O.S. - Stasyshyn, N. Ya. Ivanov, H. P. Tkachuk [and others]; ed. by V. V. Stasiuk – 4th ed., ed. – Kyiv: All-Ukrainian Specialized Publishing House “Medytsyna”, 2017. – 536 p.

## **7. INFORMATION RESOURCES**

1. <http://libr.knmu.edu.ua>
2. <http://www.medscape.com>, <http://www.orpha.net>,
3. <https://www.aace.com/>, <http://nbuv.gov.ua> – website of the National Library of Ukraine named after V. I. Vernadskyi.
4. <http://korolenko.kharkov.com> – website of the Kharkiv State Scientific Library named after V. H. Korolenko