FEDERAL STATE BUDGETARY
EDUCATIONAL INSTITUTION OF HIGHER EDUCATION
«AMUR STATE MEDICAL ACADEMY»
MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

AGREED
Vice-Rector for Academic Affairs,
_____N.V. Loskutova

April 17, 2025

Decision of the CCMC
April 17, 2025
Protocol No. 7

APPROVED
by decision of the Academic Council of the FSBEI HE Amur SMA of the Ministry of Health of the Russian Federation
April 22, 2025

Protocol No. 15

Acting Rector of the FSBEI HE Amur SMA of the Ministry of Health of the Russian Federation

_____I.V. Zhukovets

April 22, 2025

ДОКУМЕНТ ПОДПИСАН
ЭЛЕКТРОННОЙ ПОДПИСЬЮ

Сертификат: 50AB2242604E64520B52614FA420034A
Владелец: Жуковец Ирина Валентиновна
Действителен: с 15.04.2025 до 09.07.2026

EDUCATIONAL PROGRAM

discipline «Propaedeutics of Internal Diseases»

Specialty: 31.05.01 General Medicine
Course: 3
Semester: 5-6
Total hours: 360 hrs.
Total credits: 10 credit units
Control form: examination, 6 semester

Blagoveshchensk, 2025

The educational program of the discipline is designed in accordance with the requirements of the Federal State Educational Standard of Higher Education - specialist in specialty 31.05.01 General Medicine, approved by the order of the Ministry of Education and Science of Russia dated 08.12.2020 No. 988 (registered with the Ministry of Justice of Russia on 08.26.2020 No. 59493), BPEP HE (2021).

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APPROVED at the meeting of the Department of Propaedeutics of Internal Diseases, Protocol No. 8 dated April 15, 2025

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Conclusion of the Expert Commission on the review of the Educational Programs: Protocol No. 1 dated April 16, 2025

Expert of the expert commission,
Holder of the Advanced Doctorate (Doctor of Sciences) in Medical Sciences, Professor _____ E.E. Molchanova

APPROVED at the meeting of the CMC No. 3:
Protocol No. 6 dated April 17, 2025

Chairman of the CMC No. 3
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AGREED: Dean of the Faculty of Medicine,
Ph.D. of Medical Sciences _____ N.G. Brush

April 17, 2025

CONTENT

I. EXPLANATORY NOTE

1.1. Characteristics of the discipline

Modern reforms in healthcare and higher medical education require training of qualified doctors capable of solving complex issues of diagnostics, treatment and prevention of various diseases. Knowledge of the basics of clinical medicine, which are taught at the Department of Internal Medicine Propaedeutics, is important for training doctors of all specialties. Internal medicine propaedeutics is one of the first and leading clinical disciplines of a medical university, the study of which is the basis for improving the theoretical and practical training of a doctor. When studying the discipline, students develop important professional skills in examining a patient, the basics of clinical thinking, medical ethics and deontology. Without mastering the basic skills of propaedeutic therapy, it is difficult to count on sufficiently high-quality training of students of the medical faculty in their senior years. Thus, internal medicine propaedeutics is an integral fundamental part of a doctor's clinical training.

When presenting a lecture course of a discipline, the connection between the topics and sections of the program is emphasized, while ensuring the perception of the discipline as a single, integral science.

Classes in propaedeutics of internal diseases are held in two semesters: in the 5th semester and the 6th semester . Classes in the discipline are held in accordance with the curriculum in classrooms, hospital wards, and a simulation and certification center.

In the sixth semester, an exam (midterm assessment) is held, consisting of a theoretical part, including testing in the Moodle system , a survey of the student on tickets, and a practical part: methods of examining a patient, interpretation of clinical and biochemical tests, ECG, radiographs, spirograms, ultrasound (checking the acquisition of competencies).

1.2. Objectives and tasks of the discipline

The purpose of teaching the discipline is to deepen basic knowledge and form systemic knowledge about the mechanisms of formation of the main clinical symptoms and syndromes of internal organs, their diagnosis, to form in students professional skills in examining a patient, the basics of clinical thinking, medical ethics and deontology, interpretation of the results of additional research methods.

Learning objectives of the discipline:

1. study of methods of direct examination of the patient (questioning, examination, palpation, percussion, auscultation, measurement of blood pressure, study of the properties of the arterial pulse, etc.);
2. study of the causes of the main pathological processes in the body and the mechanisms of their development;
3. study of the main clinical symptoms and syndromes of diseases of internal organs and the mechanisms of their occurrence;
4. study of the symptomatology of the most common diseases of internal organs occurring in a typical form;
5. familiarization with the basic principles of treatment of patients with diseases of the respiratory system, circulatory system, digestion, urination, hematopoiesis, etc.;
6. study of symptoms and mastery of the basic principles and methods of providing medical care in the main emergency conditions;

7. mastering the basic methods of clinical and laboratory diagnostics of patients with a therapeutic profile .
8. Familiarization with the rules for preparing medical documentation, working with educational, reference, medical and scientific literature , official statistical reviews, including those on the Internet.

1.3. The place of the discipline in the structure of the main professional educational program higher education

In accordance with the Federal State Educational Standard of Higher Education - specialist in specialty 31.05.01 General Medicine (2020), the discipline "Propaedeutics of Internal Diseases" belongs to the basic part, Block 1. The total workload is 10 credits (360 hours), taught in the 5th and 6th semesters of the 3rd year. The form of control is an exam in the 6th semester.

Students are trained on the basis of continuity of knowledge and skills acquired in previous disciplines. The discipline "Propaedeutics of Internal Diseases" is a subject necessary for studying specialized disciplines that are taught in parallel with this subject or in subsequent years. Mastering the discipline "Propaedeutics of Internal Diseases " precedes studying the following disciplines: pathological anatomy, clinical pathological anatomy, pathophysiology, clinical pathophysiology, faculty therapy, occupational diseases, hospital therapy, endocrinology, outpatient therapy, phthisiology, infectious diseases, epidemiology, faculty surgery, urology, public health and health care, health economics, anesthesiology, resuscitation, intensive care, hospital surgery, pediatric surgery.

The discipline "Propaedeutics of Internal Diseases" includes the following sections:

1) general questions with the study of the basic methods of clinical examination of the patient and general concepts of instrumental and laboratory research methods;
2) diseases of the respiratory system;
3) diseases of the circulatory system;
4) diseases of the digestive system;
5) diseases of the kidneys and urinary tract;
6) diseases of the blood system;
7) diseases of the endocrine system.

1.4. Requirements for students

To study the discipline "Propaedeutics of Internal Diseases", the student must have the necessary knowledge, skills and abilities formed in previous disciplines

Latin
Knowledge **:** Basic medical and pharmaceutical terminology in Latin.
Skills: be able to apply knowledge for communication and obtaining information from medical literature, medical documentation (II - III level).
Skills: applies medical and pharmaceutical terminology in Latin in professional activities
Professional foreign language
Knowledge: basic medical and pharmaceutical terminology in a foreign language (II - III level).
Skills **:** be able to apply knowledge for communication and obtaining information from foreign sources.
Skills: applies medical and pharmaceutical terminology in a foreign language in professional activities
History of Medicine
Knowledge: outstanding figures in medicine and health care, Nobel laureates, outstanding

medical discoveries in the field of therapy, the influence of humanistic ideas on medicine (II - III level).
Skills: be able to competently and independently present and analyze the contribution of domestic scientists to the development of medicine.
Skills: applies medical discovery data in professional activities
Philosophy
Knowledge: methods and techniques of philosophical analysis of problems; forms and methods of scientific knowledge, their evolution; basic patterns and trends in the development of the world historical process; laws of dialectical materialism in medicine. (II - III level)
Skills: be able to competently and independently express, analyze the forms and methods of scientific knowledge and the laws of dialectical materialism in medicine.
Skills: applies laws of dialectical materialism in professional activity
Histology, embryology, cytology
Knowledge: embryogenesis, histological structure of tissues and systems (II - III level).
Skills: be able to determine age-related patterns of development of organs and systems; analyze the results of histophysiological research
Skills: applies data on embryogenesis and histological structure of tissues and systems in professional activities
Microbiology, virology
Knowledge: the impact of microbes, viruses, rickettsia, and fungi on the body. Microbiological diagnostics of infectious diseases (Level II).
Skills: be able to analyze the results of microbiological diagnostics of infectious diseases.
Skills: applies data of microbiological diagnostics of infectious diseases in professional activities
Modern problems of regeneration
Knowledge: biological essence, main forms and phases of the main types of regeneration - physiological and reparative; general ideas about the possibility of stimulating regenerative processes occurring in the body; main types of stem cells, sources of their production, application in medicine (II - III level).
Skills: be able to analyze the patterns of physiological and reparative regeneration and the importance of the immune system.
Skills: applies patterns of physiological regeneration in professional activities
Physics, Mathematics. Medical informatics
Knowledge: mathematical methods for solving intellectual problems and their application in medicine; theoretical foundations of computer science, collection, storage, search, processing, transformation, distribution of information in medical and biological systems, use of information computer systems in medicine and health care; principles of operation and design of equipment used in medicine, principles of physical and mathematical laws reflected in medicine (II - III level).
Skills: be able to use educational, scientific, popular science literature, the Internet for professional activities, work with equipment taking into account safety regulations **.**
Skills: applies methods of statistical processing in professional activities
Chemistry. Bioinorganic chemistry and biophysical chemistry in medicine
Knowledge : the chemical and biological essence of the processes occurring in a living organism at the molecular and cellular levels (II - III level).
Skills : be able to analyze the contribution of chemical processes to the functioning of the cardiovascular, respiratory, digestive, urinary, and hematopoietic systems.
Skills: applies data on chemical processes at the molecular level in professional activities
Biochemistry
Knowledge: Blood composition, biochemical blood constants, hormones, buffer systems, hemoglobin oxygenation factors, erythrocyte metabolism Protein and carbohydrate metabolism. Biological processes of blood coagulation. Lipid metabolism. Characteristics of metabolic

disorders and acid-base balance. Methodology for determining total protein, protein fractions in blood serum, glucose tolerance test, total cholesterol, urea, bilirubin, blood transaminases (II - III level).
Skills: be able to analyze the contribution of biochemical processes to the functioning of organs and the cardiovascular, respiratory, digestive, urinary, and hematopoietic systems, interpret the results of the most common laboratory diagnostic methods to identify disorders in diseases of internal organs and occupational diseases.
Skills: applies data from biochemical research methods in professional activities
Biology
Knowledge: laws of genetics and its importance for medicine; patterns of heredity and variability in individual development as the basis for understanding the pathogenesis and etiology of hereditary and multifactorial diseases; biosphere and ecology, the phenomenon of parasitism and bioecological diseases (II - III level).
Skills: be able to analyze patterns of heredity and variability in the development of diseases of internal organs and occupational diseases.
Skills: applies patterns of heredity in professional activity
Anatomy
Knowledge: Anatomical and physiological features of the respiratory, cardiovascular, digestive, hematopoietic, endocrine, and urinary systems (II - III levels).
Skills: be able to analyze age- and gender-related features of the structure of organs and systems.
Skills: applies data on the anatomical and physiological characteristics of organs and systems in professional activities
Normal Physiology
Knowledge : physiology of respiration, blood circulation, gastrointestinal tract, kidneys. Physiology of the blood system. Formed elements of the blood system. Phase structure of the cardiac cycle. Mechanism of occurrence of heart sounds in the norm. Normal ECG and PCG: decoding method, registration. (II - III level).
Skills : be able to analyze the importance of regulation of biological processes in the human body on functioning cardiovascular, digestive, urinary, respiratory, hematopoietic systems.
Skills: applies data of normal physiology in professional activity
Topographic anatomy and operative surgery
Knowledge: structure, topography of cells, tissues, organs and systems of the body in interaction with their function in norm and pathology. (Level II)
Skills: be able to analyze the functional features of the cardiovascular, respiratory, digestive, urinary, and hematopoietic systems in normal and pathological conditions.
Skills: applies data on the functioning of organs and systems in professional activities
Clinical Physiology
Knowledge: morphological changes in tissues organism in case of cardiovascular pathology , respiratory, digestive, urinary and blood systems (II level).
Skills: be able to determine the contribution of pathophysiological processes to the development of diseases of internal organs.
Skills: applies data on pathophysiological processes of disease development in professional activities
Pharmacology
Knowledge : mechanism of action and side effects the influence of various drugs on the body. (II - III level).
Skills: be able to write prescriptions for prescribed medications, know the indications and contraindications for their use.
Skills: applies medicines, writes prescriptions
Human radiation anatomy
Knowledge : changes in diseases of internal organs: pneumonia, COPD, rheumatism, heart

defects, hypertension, atherosclerosis, myocardial infarction, glomerulonephritis, hepatitis and liver cirrhosis.
Skills: identify pathomorphological changes in diseases of internal organs
Skills: applies X-ray diagnostic and treatment methods in professional activities

1.5. Interdisciplinary links with subsequent disciplines

The knowledge and skills acquired in the discipline "Propaedeutics of Internal Diseases" are necessary for studying the following disciplines:

Item No.	**Name of subsequent disciplines**	**Section numbers of propaedeutics of internal diseases, necessary for studying subsequent disciplines**						
		1	2	3	4	5	6	7
1	Pathological anatomy, clinical pathological anatomy	+	+	+	+	+	+	+
2	Pathophysiology, clinical pathophysiology	+	+	+	+	+	+	+
3	Faculty therapy	+	+	+	+	+	+	+
4	Occupational diseases	+	+	+	+	+	+	+
5	Hospital therapy	+	+	+	+	+	+	+
6	Endocrinology	+	+	+	+	+	+	+
7	Outpatient therapy	+	+	+	+	+	+	+
8	Phthisiology	+	+					
9	Infectious diseases	+	+	+	+	+	+	+
10	Epidemiology	+	+	+	+	+	+	+
11	Faculty surgery, urology	+	+	+	+	+	+	+
12	Public health and healthcare, health economics	+						
13	Anesthesiology, resuscitation, intensive care		+	+	+	+		+
14	Pediatrics	+	+	+	+	+	+	+
15	Hospital surgery, pediatric surgery	+	+	+	+	+	+	+

1.6. Requirements for the results of mastering the discipline

The process of studying the discipline "Propaedeutics of Internal Diseases" is aimed at **the formation of the following universal competencies (UC), general professional (GP) and professional competencies (PC)** : UK-1; GP-1,4,6; PC-2,3,14

No. p/p	Code and name of competence	Code and name of the indicator of achievement of competence	As a result of studying the academic discipline "Propaedeutics of Internal Diseases", the student must:		
			Know	**Be able to**	**To own**
Universal competencies					
1.	**UK-1.** Capable of carrying out a critical analysis of problematic situations based on a systems approach, developing an action strategy	**ID UK-1.1.** Analyzes a problem situation as a system, identifying its components and the connections between them. **ID UK-1.2.** Identifies gaps in information needed to solve problem situations and designs processes to eliminate them. **ID UK-1.5.** Critically evaluates the reliability of information sources, works with contradictory information from different sources.	The main historical stages of the development of internal medicine, the subject and objectives of the discipline, the relationship with other clinical disciplines; the main concepts used in medicine	To characterize the stages of development of medicine as a science and its role at the present stage; to evaluate the contribution of domestic scientists to the development of therapy	The ability to analyze the importance of propaedeutics of internal diseases at the present stage
General professional competencies					
2.	**OPK-1.** Capable of implementing moral and legal norms, ethical and deontological	**ID OPK-1.1.** Carries out professional activities in accordance with ethical standards and moral principles.	The concept of medical ethics and deontology. Rules for collecting complaints, anamnesis, basic and additional methods of	Establish contact with colleagues, mid-level and junior medical staff, patients and their relatives	The ability to implement ethical and deontological aspects of medical practice in practical work

	principles in professional activities	**ID OPK-1.2.** Organizes professional activities, guided by legislation in the field of healthcare, knowledge of medical ethics and deontology. **ID OPK-1.3** . Has the skills of presenting an independent point of view, analysis and logical thinking, public speaking, moral and ethical argumentation, conducting discussions and round tables, principles of medical deontology and medical ethics.	examining a patient, taking into account moral, legal and ethical standards		
3.	**OPK-4.** Capable of using medical products provided for by the procedure for providing medical care, as well as conducting patient examinations to establish a diagnosis	**ID OPK-4.1.** Uses modern medical technologies, specialized equipment and medical products, disinfectants, drugs, including immunobiological and other substances and their combinations when solving professional problems from the standpoint of evidence-based medicine. **ID OPK-4.2.** Knows the indications and contraindications for the	Modern possibilities of medical technology, specialized equipment, medical products, in solving professional problems from the standpoint of evidence-based medicine.	Examine the patient to establish a diagnosis , use specialized equipment, medical products, disinfectants, and medications .	Methods of general clinical examination of patients of different ages. Interpret the results of instrumental, laboratory and functional diagnostics, thermometry to identify pathological processes.

		appointment of instrumental, functional and laboratory examination methods, possible complications during the examination, emergency care and their prevention. **ID OPK-4.3.** Interprets the results of the most common methods of instrumental, laboratory and functional diagnostics, thermometry to identify pathological processes. **ID OPK-4.4.** Proficient in methods of general clinical examination of patients of various ages. **ID OPK-4.5.** Formulates a preliminary diagnosis and clinical diagnosis according to ICD.			
4.	**OPK-6.** Capable of organizing patient care, providing primary health care, ensuring the organization of work and making professional decisions in emergency situations at the pre-hospital stage, in emergency	**ID OPK-6.1.** Organizes patient care, provides primary health care and emergency care to patients. **ID OPK-6.2.** Uses medical means of protection, prevention, provision of medical care and treatment of injuries caused by toxic substances of various nature,	Medical means of protection, prevention, provision of medical care and treatment of injuries caused by toxic substances of various nature, radioactive substances and biological agents.	Organize care for patients, provide primary health care and emergency care to patients.	The ability to make professional decisions in emergency situations, provide first aid at the pre-hospital stage, in emergency situations, epidemics and in areas of mass destruction.

	situations, epidemics and in areas of mass destruction	radioactive substances and biological agents. **ID OPK-6.3.** Makes professional decisions in emergency situations and provides first medical aid at the pre-hospital stage, in emergency situations, epidemics and in areas of mass destruction.			
Professional competencies					
5.	**PC-2.** Able to collect and analyze complaints, life history and medical history of the patient in order to establish a diagnosis	**ID PC-2.1.** Establishes contact with the patient. **PC ID -2.2.** Collects complaints, specifies them, highlighting the main and secondary ones. **ID PC-2.3.** Collects and analyzes information about the onset of the disease, the presence of risk factors, the dynamics of the development of symptoms and the course of the disease. **PC ID – 2.4.** Analyzes the timing of the first and repeated requests for medical care, the volume of therapy administered, and its	Fundamentals of the legislation of the Russian Federation, the main regulatory and technical documents on public health protection, the fundamentals of insurance medicine, the fundamentals of preventive medicine aimed at strengthening public health	Establish contact with the patient, collect complaints, specify them, highlighting the main and secondary ones, collect anamnesis of the disease and life, including data on past illnesses, injuries and surgical interventions, hereditary, professional, epidemiological anamnesis	Methods of collecting complaints, anamnesis of the disease and life, identify the main syndromes in diseases of internal organs

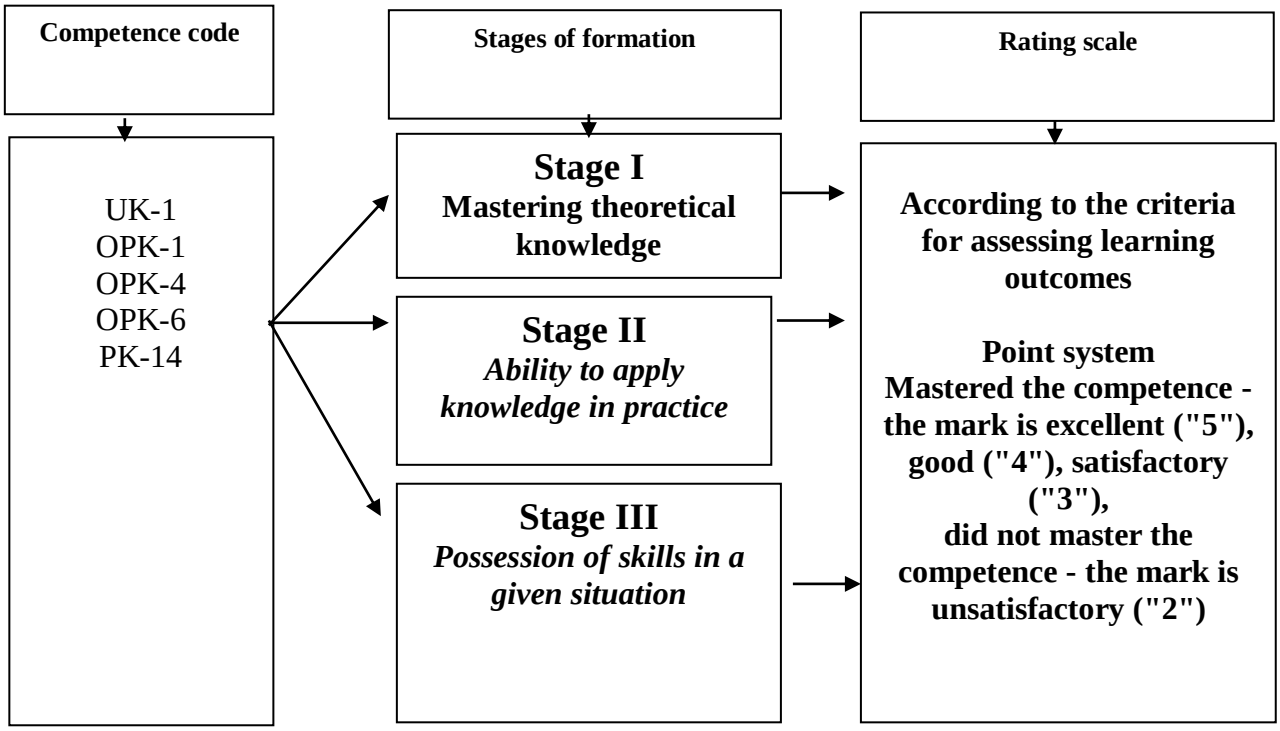
		effectiveness. **PC ID – 2.5 .** Collects and evaluates information about the patient's medical history, including data on past illnesses, injuries and surgeries, hereditary, professional and epidemiological history.			
6.	**PC-3.** Able to conduct a physical examination of a patient, analyze the results of additional examination methods in order to establish a diagnosis	**ID PC-3.1.** Conducts a complete physical examination of the patient (inspection, palpation, percussion, auscultation) and interprets its results. **PC ID 3.2.** Justifies the necessity, volume, sequence of diagnostic measures (laboratory, instrumental) and referrals for consultations with medical specialists. **ID PC - 3.3.** Analyzes the results of the patient examination, if necessary, justifies and plans the scope of additional studies. **ID PC-3.4.** Interprets and	Methodology of examination and objective examination of the patient. Justifies the necessity, volume, sequence of diagnostic measures (laboratory, instrumental) and referrals for consultations to medical specialists.	Conduct a complete physical examination of the patient (inspection, palpation, percussion, auscultation) and interpret its results, Justify the need, the sequence of diagnostic measures (laboratory, instrumental)	Ability to analyze the results of a patient's examination and, if necessary, justify and plan the scope of additional research.

		analyzes the results of collecting information about the patient's disease, data obtained during laboratory and instrumental examinations and during consultations with specialist doctors, and, if necessary, justifies and plans the scope of additional research.			
7.	**PC-14.** Capable of participating in research activities	**PC ID - 14.1.** Participates in conducting scientific research. **PC ID -14.2** . Analyzes medical information based on evidence-based medicine.	Main scientific and medical information sources (domestic and foreign medical journals, including those on the Internet)	Work independently with educational, scientific, reference, medical literature, including on the Internet	Modern methods of independent study of educational material, including searching the Internet, working with scientific, reference, medical literature and a systematic approach to the analysis of medical information

Section of discipline and code of the competence being formed

No. p/p	Section name	Code of the competence being formed
1.	General questions with the study of the main methods of clinical examination of the patient and general concepts of instrumental and laboratory research methods	UK-1, OPK-1,4,6
2.	Respiratory diseases	UK-1, OPK-1,4,6, PC-2,3,14
3.	Diseases of the circulatory system	UK-1, OPK-1,4,6, PC-2,3,14
4.	Diseases of the digestive system	UK-1, OPK-1,4,6, PC-2,3,14
5.	Diseases of the kidneys and urinary tract	UK-1, OPK-1,4,6, PC-2,3,14
6.	Diseases of the endocrine system	UK-1, OPK-1,4,6, PC-2,3,14
7.	Diseases of the blood system	UK-1, OPK-1,4,6, PC-2,3,14
	Total number of competencies - 7	

1.7. Stages of competence formation and descriptions of assessment scales



1.8. Forms of organization of training and types of control

Form of organization of students' training	**Brief characteristic**
Lectures	The lecture material contains key and most problematic issues of the discipline, which are most significant in the preparation of a specialist.
Clinical practical classes: -independent work at the patient's bedside; -work in diagnostic rooms; -classes at the certification and accreditation center	They are intended for the analysis (reinforcement) of theoretical principles and monitoring of their assimilation with subsequent application of the acquired knowledge during the study of the topic, practical skills and abilities.
Interactive forms of education	- solving situational problems with subsequent discussion, - interactive survey; - small group method, - case method - online course of the discipline in the Moodle system , - testing in the Moodle system .
Participation in the department's research work, student circle and conferences	- working with thematic patients and conducting analysis of case histories; - preparation of oral presentations and poster reports for presentation at a student club or scientific conference; - writing theses and abstracts on the chosen scientific field; - preparation of a literature review using educational, scientific, reference literature and Internet sources.
Types of control	**Brief description**
Incoming inspection	Testing theoretical knowledge and practical skills developed by the program on propaedeutics of internal diseases to determine the level of preparedness of students in previously completed disciplines. The entrance knowledge control includes: - testing in the Moodle system (test of incoming knowledge control), The results of the incoming inspection are systematized, analyzed and used by the department staff to develop measures to improve and update the teaching methods of the discipline.
Current control	Current knowledge control includes: - assessment of the assimilation of theoretical material (oral survey and computer testing); - control over the acquisition of practical skills (interpretation of the results of clinical, laboratory and instrumental examination methods, formulation of a clinical syndrome, completed independently (classroom independent work); - monitoring the assimilation of the patient examination methodology during clinical practical classes and preparation of the protocol; - checking the solution of situational problems completed independently (extracurricular independent work);

	- testing in the Moodle system on all topics of the discipline (tests include questions of a theoretical and practical nature); - patient care and medical history preparation.
Intermediate certification	Midterm assessment is represented by a test at the end of the 5th semester and an exam in the 6th semester. The exam includes the following stages: - assessment of knowledge of theoretical material (oral survey and interview); - testing in the Moodle system (interim assessment test); - testing the acquisition of practical skills and abilities at the patient's bedside; - analysis of ECG, PCG, spirogram; - interpretation of results of laboratory research methods.

II . STRUCTURE AND CONTENT OF THE DISCIPLINE

2.1. Scope of the discipline and types of educational activities

Types of educational work	**Total hours**	**Semesters**	
		5	6
Lectures	64	28	36
Clinical practical classes	152	68	84
Independent work of students	108	48	60
Exam	36	-	36
Total labor intensity in hours	360	144	216
Total workload in credit units	10	4.0	6.0

2.2. Тематический план лекций и их краткое содержание

Item No.	Lecture topics	Codes of formed competencies	Labor intensity (hours)
1.	Internal medicine and its place among other medical disciplines. Domestic therapeutic schools. Basic principles of organization of Russian healthcare. Subject and tasks of propaedeutics of internal diseases. Methodology of diagnosis. Scheme of medical history. Questioning and general examination of the patient. Basic and additional methods of examination of the patient. Concept of medical ethics and deontology .	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
2.	Questioning and general examination of patients with respiratory diseases. Examination and palpation of the chest. Percussion. Physical justification, methodology and technique of percussion. Comparative percussion of the lungs, its rules. The nature of the percussion sound over the lungs in norm and pathology. Diagnostic value of comparative percussion of the lungs.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
3.	Topographic percussion of the lungs. Topographic lines of the chest. Determination of the upper and lower boundaries of the lungs, mobility of the lower edges of the lungs. Topography of the lobes of the lung, their projection on the chest wall. Diagnostic value of changes in the boundaries of the lungs.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
4.	Auscultation. Historical essay. Physical basis, methods, instruments. Methods of auscultation of the lungs. The concept of vesicular and laryngotracheal breathing, the mechanism of their formation, places of listening. Changes in respiratory sounds in pathology and their diagnostic value.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
5.	Auscultation of the lungs. Adverse respiratory sounds: wheezing, crepitation, pleural friction rub. Mechanism of formation, diagnostic value. Bronchophony, method of determination, value in diagnostics of lung and pleural pathologies. Concept of syndromes: bronchial obstruction, compaction of lung tissue, increased airiness of lung tissue, cavity in the lung, accumulation of fluid, air in the pleural cavity, atelectasis syndrome (obstructive and compression).	UK-1 OPK-1 OPK-4 OPK-6 PC-2	**2**

		PC-3	
6.	Questioning and examination of patients with cardiovascular diseases. Examination of the heart area and large vessels. Apical and cardiac impulse, systolic and diastolic tremor. Study of the peripheral pulse.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
7.	Percussion of the heart. Methods for determining the boundaries of relative and absolute cardiac dullness, vascular bundle. Determining the contours and sizes of the heart. Types of cardiac configuration. Diagnostic significance of changes in cardiac boundaries.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
8.	Auscultation of the heart. Methods of auscultation of the heart. Places of listening and true projection of the heart valves on the anterior chest wall, the concept of heart tones, mechanisms of their occurrence. Changes in heart tones in pathology: weakening, strengthening, bifurcation, appearance of additional tones. "Quail rhythm", "gallop rhythm", pendulum rhythm (embryocardia), tachycardia, bradycardia, arrhythmia.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
9.	Auscultation of the heart. Heart murmurs, mechanism of occurrence. Classification. Distinction between organic and functional murmurs. Relation of murmurs to phases of cardiac activity. Systolic and diastolic murmurs. Places of best listening, pathways of conduction of heart murmurs. Pericardial friction murmur, pleuropericardial murmurs. Diagnostic value.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
10.	Electrocardiographic research method. Historical essay. Anatomical and physiological features of the cardiac muscle and cardiac conduction system. Electrocardiographic leads. Technique and rules for recording an ECG in 12 leads. ECG decoding plan. Vector principle of ECG analysis. Normal ECG.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
11.	Electrocardiography. ECG in atrial and ventricular myocardial hypertrophy. ECG signs of myocardial infarction, stages, topical diagnostics. The importance of PCG for diagnostics of heart and vascular	UK-1 OPK-1	**2**

	diseases.	OPK-4 OPK-6 PC-2 PC-3	
12.	Electrocardiography. ECG for rhythm disturbances. ECG signs of extrasystole, paroxysmal tachycardia, atrial fibrillation, sinoatrial and atrioventricular blocks. ECG signs of bundle branch block. The concept of cardiac defibrillation.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
13.	Questioning and examination of patients with diseases of the digestive organs. Examination, percussion of the abdomen. Methods for determining ascites. Palpation of the abdomen (superficial orientation and deep methodical sliding according to V.P. Obraztsov and N.D. Strazhesko).	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
14.	Questioning and examination of patients with liver and biliary tract diseases. Main symptoms and mechanisms of their occurrence. Percussion, palpation of the liver and spleen. Changes in the size of the liver and spleen in pathology, diagnostic value. The concept of splenomegaly and hypersplenism.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**
15.	Questioning and examination of patients with diseases of the urinary organs. Percussion, palpation of the kidneys and bladder. Methods and techniques of palpation of the kidneys. The concept of nephroptosis. Instrumental methods of examination of the kidneys and bladder.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3	**2**

16.	Pneumonia symptoms (focal and lobar). Methods of clinical, laboratory and instrumental diagnostics of these diseases. Changes in blood tests in pneumonia. Diagnostic value of X-ray and bronchoscopic examination in pulmonology (general concepts). Respiratory failure syndrome. Spirometry, the value of this method in diagnostics of respiratory failure. Blood gas analysis.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
17.	Symptomatology of acute and chronic bronchitis. The concept of COPD. Clinic, diagnostics of obstructive and non-obstructive bronchitis. Bronchiectatic disease, main symptoms and mechanisms of their occurrence. Lung abscess, clinical presentation, laboratory and instrumental diagnostics. Pulmonary hemorrhage, difference from gastrointestinal bleeding. Emergency care for pulmonary hemorrhage.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
18.	Symptomatology of bronchial asthma. Asthmatic status, clinical features, diagnostics. Emergency care. Emphysema of the lungs, clinical symptoms and mechanisms of their occurrence. Methods of clinical, laboratory and instrumental diagnostics.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
19.	Symptomatology of pleurisy (dry and exudative). Hydrothorax, pneumothorax. Concept of pulmonary heart, main symptoms and mechanisms of their occurrence. Methods of clinical, laboratory and instrumental diagnostics. Importance of echo-Dopplercardiography in diagnostics of pulmonary hypertension and chronic pulmonary heart.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**

20.	The concept of rheumatism. Symptomatology of mitral heart defects: stenosis of the left atrioventricular orifice and mitral valve insufficiency. Tricuspid valve insufficiency. Laboratory methods for diagnosing rheumatism. Changes in ECG and PCG in mitral and tricuspid valve defects. The importance of echo-Dopplercardiography for diagnostics.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
21.	Symptomatology of aortic heart defects: stenosis of the aortic orifice and aortic valve insufficiency. Changes in hemodynamics, clinical symptoms. Methods of instrumental diagnostics of aortic defects: ECG, echocardiography, PCG and radiography of the heart.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
22.	The concept of atherosclerosis: risk factors, development mechanisms. Symptomatology of coronary heart disease: angina and myocardial infarction. Myocardial infarction, main symptoms and the mechanism of their occurrence. Laboratory and instrumental diagnostics. ECG changes in ischemic heart disease. Complications of myocardial infarction. Cardiogenic shock: clinical presentation, diagnostics. Emergency care.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
23.	Symptomatology of arterial hypertension. Hypertension, stages. Laboratory and instrumental diagnostic methods; changes in the fundus, diagnostic value. Symptomatic hypertension. Method of determining arterial pressure. Hypertensive crises: clinical presentation, diagnostics, emergency care.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
24.	Myocardial damage syndromes (myocarditis, myocardiopathy, myocardial dystrophy). Circulatory failure (acute and chronic). Mechanism of development. Methods of clinical, laboratory and instrumental diagnostics. Methods of determining central and intracardiac hemodynamics. Functional stress tests. Emergency care for acute left ventricular failure.	UK-1 OPK-1 OPK-4 OPK-6 PC-2	**2**

		PC-3 PC-14	
25.	Symptomatology of acute and chronic gastritis, gastric ulcer and duodenal ulcer. Main symptoms of gastric and intestinal dyspepsia, hypersecretory, hyposecretory syndrome of stomach dysfunction, mechanisms of their occurrence. Peculiarities of pain syndrome in gastric ulcer depending on ulcer localization. Laboratory, radiological and instrumental diagnostics of diseases of the stomach and duodenum. Gastrointestinal bleeding: clinical presentation, diagnostics, emergency care.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
26.	Symptomatology of cholecystitis . Methods of clinical and instrumental examination. Method of duodenal sounding. Bile examination. Radioisotope, ultrasound, X-ray examination of the gallbladder.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
27.	Laboratory and instrumental methods of studying the liver and biliary tract. Functional liver tests: study of pigment, carbohydrate, protein, fat metabolism, detoxifying, excretory functions of the liver. Enzyme study.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
28.	Symptomatology of hepatitis and liver cirrhosis. Main liver syndromes: portal hypertension, jaundice, liver failure, hepatosplenic syndrome. Mechanism of their occurrence. Types of jaundice. Clinical, laboratory and instrumental diagnostics of liver and biliary tract diseases.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**3**
29.	Symptomatology of acute and chronic glomerulonephritis, chronic pyelonephritis. The main syndromes in kidney diseases: edema syndrome, nephrotic syndrome, renal arterial hypertension, renal eclampsia, renal failure. Methods of clinical, laboratory and instrumental diagnostics. General urine analysis. Urine test	UK-1 OPK-1 OPK-4	**3**

	according to Nechiporenko. Zimnitsky test and Reberg test. Determination of urea, creatinine, residual nitrogen, total protein, cholesterol in blood serum. Their diagnostic value. Radioisotope, X-ray ultrasound examination of the kidneys. The concept of cystoscopy, catheterization of the bladder and ureters. Features of changes in the fundus in kidney diseases.	OPK-6 PC-2 PC-3 PC-14	
30.	Main symptoms and methods of examination of patients with endocrine diseases and metabolic disorders (diffuse toxic goiter, hypothyroidism, diabetes mellitus, adrenal insufficiency, obesity). Laboratory and instrumental methods of examination. Determination of glucose content in blood and urine, acetone in urine. Glycemic curve. Diagnostic value of radioisotope examination of the thyroid gland. Main indicators of fat and carbohydrate metabolism.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
31.	Symptomatology of blood diseases. Anemia and leukemia. Hemorrhagic syndrome. Laboratory and instrumental methods of examination. Clinical blood test. Diagnostic value of changes: leukocytosis, leukopenia, increased ESR, leukemoid reaction. Basic methods of examination of the coagulation and anticoagulation systems of blood. Concept of bone marrow puncture, lymph nodes, trepanobiopsy.	UK-1 OPK-1 OPK-4 OPK-6 PC-2 PC-3 PC-14	**2**
Total hours			**64**

2.3 . Thematic plan of clinical practical classes and their content

Topic No. p/p	Name of topics of clinical practical classes	Contents of topics of clinical practical classes of the discipline	Codes of formed competencies and indicators of their achievement	Types of control	Labor intensity (watch)
1.	Introducing students to the clinic. Subject and tasks of propaedeutics of internal diseases. Scheme of the medical history. Questioning and general examination of the patient. Medical ethics and deontology.	**Theoretical part:** Introducing students to the clinic. Subject and tasks of propaedeutics of internal diseases. Internal medicine and its place among other medical disciplines. Brief history of the development of the doctrine of diagnostic methods and internal diseases. Domestic therapeutic schools. Basic principles of modern organization of health care. Features of medical care for therapeutic patients. **Practical part:** Outline of the medical history. Questioning and general examination of the patient. Methodology of diagnosis. Medical ethics and deontology. General idea of insurance medicine. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3.	Testing Frontal survey Interactive survey	4
2.	Questioning, general examination of a patient with respiratory diseases. Examination and palpation of the chest. Types of percussion. Methods and techniques of percussion. Topographic percussion of the lungs.	**Theoretical part:** Questioning, general examination of a patient with respiratory diseases. Examination and palpation of the chest. Determination of painful areas, their localization. Determination of the resistance (elasticity) of the chest. Study of vocal fremitus in symmetrical areas. History of the development of percussion as a research method. Physical rationale for percussion.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3 .	Testing Frontal survey Interactive survey Control of practical skills	44

		Types of percussion. **Practical part:** Methods and techniques of percussion. Topographic percussion of the lungs. Topographic lines of the chest. Determination of the upper boundaries of the lungs, the height of the apex in front and behind. Determination of the lower boundary of the lungs and the mobility of the lower edges of the lungs, causes of changes. Diagnostic value. Design of the workbook.	PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.		
3.	Comparative percussion of the lungs, methods and techniques for its implementation. Changes in percussion sound in various pathological processes in the lungs.	**Theoretical part:** the nature of the percussion sound on symmetrical areas of the chest in norm and pathology (clear pulmonary sound, dull, dull, box-like, tympanic, dull-tympanic). Diagnostic value of comparative percussion of the lungs. **Practical part:** Comparative percussion of the lungs, methods and techniques for its implementation. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Control of practical skills	4
4.	Auscultation of the lungs, methods and techniques of its implementation. Vesicular and bronchial breathing in norm and pathology. Bronchophony.	**Theoretical part:** Vesicular and bronchial breathing in norm and pathology. The concept of the main and additional (side) respiratory noises, the	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1,	Testing Frontal survey Interactive	4

		mechanism of their occurrence and diagnostic value. The nature of the main respiratory noises in norm and pathology. Diagnostic value. **Practical part:** Auscultation of the lungs, methods and techniques for its implementation. Design of the workbook.	1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	survey Control of practical skills	
5.	Auscultation of the lungs. Adverse respiratory sounds. Main pulmonary syndromes.	**Theoretical part:** Adverse respiratory sounds. Dry and wet wheezing. Crepitation, pleural friction noise. Mechanism of formation. Effect of coughing, deep breathing and forced exhalation on their appearance and disappearance. Diagnostic value. Bronchophony, value in diagnostics. **Practical part:** Auscultation of the lungs. The importance of Egorov's technique in recognizing pleural friction noise. Diagnostic value. Bronchophony, determination method, value in diagnostics. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Control of practical skills	4

6.	Questioning and examination of a patient with circulatory diseases. Examination and palpation of large vessels and the heart area. Determination of the properties of the peripheral pulse. Percussion of the heart. Determination of relative, absolute cardiac dullness, width of the vascular bundle, and heart size.	**Theoretical part:** Questioning and examination of a patient with diseases of the circulatory system. Examination and palpation of large vessels and the heart area. Diagnostic significance of changes in the boundaries of relative and absolute cardiac dullness. **Practical part:** Palpation of the apical and cardiac impulses. Characteristics of the apical impulse: localization, strength, height, prevalence. Determination of systolic and diastolic tremor in the heart region. Palpation of the base of the heart. Palpatory study of epigastric pulsation, its causes. Diagnostic value. Palpation of peripheral arteries. Determination of the properties of the peripheral pulse. Percussion of the heart. Determination of relative, absolute cardiac dullness, width of the vascular bundle, heart size. Design of a workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Control of practical skills	44
7.	Auscultation of the heart and blood vessels: methods and techniques. Heart auscultation points. Heart sounds in norm and pathology.	**Theoretical part:** Auscultation of the heart and blood vessels: methods and techniques. Heart sounds in norm and pathology. The concept of heart sounds, the mechanism of their occurrence. Main sounds (I and II sounds) and additional sounds (III and IV sounds, mitral valve opening sound, systolic click). Main properties of sounds: volume, timbre. Auscultation of the heart in different phases of respiration, in different positions of the patient, at rest and during physical exertion. Places for listening to the heart and the true projection of its valves on the	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3.	Testing Frontal survey Interactive survey Control of practical skills	4

		anterior chest. Differences between ventricular systole and diastole during auscultation. Changes in tones in pathology: weakening, strengthening, bifurcation, appearance of additional tones. "Quail rhythm", gallop rhythms, pendulum rhythm (embryocardia). Tachycardia, bradycardia, arrhythmia. Practical part: Working at the patient's bedside. Auscultation of the heart and blood vessels: methods and technique. Design of the workbook.	ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.		
8.	Auscultation of heart murmurs. Functional and organic murmurs, the mechanism of their formation. Pericardial friction murmur, pleuropericardial murmurs. Instrumental methods of examination of the cardiovascular system (PCG, ECG, EchoCG, radiography, radioisotope methods).	**Theoretical part:** Auscultation of heart murmurs. Classification. Functional and organic murmurs, the mechanism of their formation. The difference between organic murmurs and functional murmurs. Systolic and diastolic murmurs: protodiastolic, mesodiastolic, presystolic, holosystolic, holodiastolic murmurs. Character, timbre, duration of murmur. Places of best auscultation of murmurs, pathways of conduction of heart murmurs. Pericardial friction murmur, pleuropericardial murmurs. Diagnostic value. Instrumental methods of examination of the cardiovascular system (PCG, ECG, echocardiography, radiography, coronary angiography, radioisotope methods). **Practical part:** Working at the patient's bedside. Auscultation of heart murmurs Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey	4

9.	A lesson in the simulation and certification center. Simulation and imitation module "Auscultation of the lungs and heart". Control lesson on the methods of patient examination.	**Theoretical part:** Methods of auscultation of the lungs and heart on modern mannequins. Rules of auscultation of the lungs. Rules of auscultation of the heart. Evaluation of the main respiratory sounds. Evaluation of secondary respiratory sounds. Evaluation of heart tones in norm and pathology. Evaluation of heart murmurs. **Practical part:** Checking the acquisition of competencies (testing, interviews on situational tasks). Working with handouts.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Interactive survey Border control	4
10.	Electrocardiography. Principles of electrocardiographic examination. Methodology of ECG recording. Methodology of decoding normal ECG .	**Theoretical part:** Principles of electrocardiographic examination. Historical essay. Anatomical and physiological features of the cardiac muscle and cardiac conduction system. Electrocardiographic leads. **Practical part:** Technique and rules for recording an ECG in 12 leads. The concept of additional leads. Decoding plan. Vector principle of ECG analysis. Normal ECG.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4.	Testing Frontal survey Interactive survey Case studies (ECG analysis)	4

			PC-14.ID:14.1, 14.2.		
11.	Electrocardiography. ECG changes in ventricular and atrial myocardial hypertrophy, in myocardial infarction.	**Theoretical part:** ECG changes in ventricular and atrial myocardial hypertrophy. ECG in coronary heart disease, myocardial infarction. Myocardial infarction stages, topical diagnostics of myocardial infarction. General ideas about the test with dosed physical load. **Practical part:** ECG analysis for hypertrophy and coronary heart disease.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3.	Testing Frontal survey Interactive survey Case studies (ECG analysis)	4
12.	Electrocardiography. Rhythm and conduction disturbances. The concept of cardiac defibrillation. Class at the simulation and certification center. Simulation and imitation module "Methodology of recording and interpreting ECG". Carrying out cardiac defibrillation .	**Theoretical part:** ECG for rhythm disturbances. ECG signs of sinus tachycardia, bradycardia, arrhythmia. ECG signs of extrasystole (atrial, nodal, ventricular), paroxysmal tachycardia (supraventricular and ventricular), atrial and ventricular fibrillation and flutter. Conduction disturbances. ECG signs of sinoatrial and atrioventricular block. ECG signs of right and left bundle branch block. Concept of cardiac defibrillation. **Practical part:** Methods of recording and interpreting ECG on modern mannequins. ECG analysis for rhythm and conduction disorders.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Case studies (ECG analysis)	4

13.	Questioning, examination of patients with diseases of the digestive organs. Examination of the abdomen. Methods for determining ascites. Palpation of the abdomen (superficial orientation and methodical deep sliding palpation according to V.P. Obraztsov and N.D. Strazhesko).	**Theoretical part:** Questioning and examination of patients with digestive system diseases. Examination of the oral cavity. Examination of the abdomen in the vertical and horizontal positions of the patient. Configuration of the abdomen. Movement of the abdominal wall during breathing. Development of venous collaterals on the anterior abdominal wall ("capita Medusa") and lateral walls. Hernial formations. Visible peristalsis of the stomach and intestines. Change in abdominal circumference. Methods for determining ascites. Palpation of the abdomen. Method of superficial orienting palpation of the abdomen. Deep methodical sliding palpation of the abdomen according to the method of V.P. Obraztsov and N.D. Strazhesko. Four moments of palpation. Sequence of abdominal palpation. Determination of the lower border of the stomach. **Practical part:** Working at the patient's bedside. Superficial, indicative palpation of the abdomen. Deep methodical sliding palpation of the abdomen according to the method of V.P. Obraztsov and N.D. Strazhesko. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Control of practical skills	4
14.	Questioning and examination of patients with liver and biliary tract diseases. Percussion, palpation of the liver and spleen.	**Theoretical part:** Questioning and examination of patients with diseases of the liver and biliary tract. **Practical part:** Working at the patient's bedside.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3.	Testing Frontal survey Interactive survey	4

		Percussion, palpation of the liver and spleen. Determining the size of the liver. Liver palpation technique. Characteristics of the liver edge and its surface. Liver tenderness. Liver palpation technique for ascites. Gallbladder palpation technique and characteristics of the results obtained when it is enlarged. Determining the length and diameter of the spleen. Spleen palpation technique. Diagnostic value of an enlarged spleen. Design of the workbook.	OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Control of practical skills	
15.	Questioning and examination of patients with urinary tract diseases. Percussion and palpation of the kidneys and bladder.	**Theoretical part:** Percussion and palpation of the kidneys and urinary bladder. Prolapse, displacement, enlargement and pain of the kidneys. Study of pain points characteristic of urinary tract diseases. Practical part: Bedside work: Percussion and palpation of the kidneys and bladder. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Control of practical skills	4
16.	Laboratory lesson: examination of peripheral blood and urine. Diagnostic	**Theoretical part:** Peripheral blood and urine examination.	UK-1. ID: 1.1, 1.2,1.5	Testing Frontal	4

	value.	Clinical blood test: determination of hemoglobin, leukocyte count, platelets, erythrocytes, reticulocytes, leukocyte formula, ESR. Diagnostic value of changes in these parameters. General urine analysis. Proteinuria, relative urine density, urine reaction, transparency, etc. Glucosuria, bilirubinuria, urobilinuria, acetonuria, their diagnostic value. Microscopic examination of urinary sediment and its diagnostic value. **Practical part:** Working with handouts. Design of the workbook.	OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	survey Interactive survey Case tasks (interpretation of clinical tests)	
17.	Laboratory lesson: examination of sputum, pleural fluid, feces, duodenal and gastric contents . Diagnostic value.	**Theoretical part:** Examination of sputum, pleural fluid, feces, gastric juice and duodenal contents. **Practical part:** Diagnostic value of changes in these indicators in pathology of internal organs. Working with handouts. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1,	Testing Frontal survey Interactive survey Case tasks (interpretation of clinical tests	44

			14.2.		
18.	Symptomatology of pneumonia. Mechanism of occurrence of clinical symptoms. Methods of clinical, laboratory and instrumental diagnostics of these diseases. Changes in blood tests in pneumonia. Importance of X-ray and bronchoscopic examinations in diagnostics of lung diseases.	**Theoretical part:** Symptomatology of pneumonia. Mechanism of clinical symptoms. Methods of clinical, laboratory and instrumental diagnostics of these diseases. Respiratory failure syndrome. Changes in blood tests in pneumonia. Importance of X-ray and bronchoscopic examinations in diagnostics of lung diseases. Concept of respiratory failure. Spirometry, recording technique. **Practical part:** Supervision of thematic patients. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Situational tasks Control of practical skills	5
19.	Symptomatology of acute and chronic bronchitis. The concept of COPD. Bronchiectasis, main symptoms, mechanism of their occurrence. Lung abscess, clinical presentation, laboratory and instrumental diagnostics. The importance of sputum examination in pulmonology. Pulmonary emphysema. The concept of pulmonary heart. Modern methods of laboratory and instrumental diagnostics. The importance of echo-Dopplercardiography in the diagnosis of pulmonary heart.	**Theoretical part:** Symptomatology of acute and chronic bronchitis. The concept of COPD. Bronchiectasis, main symptoms, mechanism of their occurrence. Lung abscess, clinical presentation, laboratory and instrumental diagnostics. The importance of sputum examination in pulmonology. Pulmonary emphysema. The concept of pulmonary heart. Modern methods of laboratory and instrumental diagnostics. The importance of echo-Dopplercardiography in the diagnosis of pulmonary heart.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3.	Testing Frontal survey Interactive survey Situational tasks Control of practical skills	5

		Practical part: Supervision of thematic patients. Design of the workbook.	ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.		
20.	Symptomatology of bronchial asthma. Asthmatic status: clinical presentation, diagnostics, emergency care. Hydrothorax, pneumothorax. Symptomatology of pleurisy (dry and exudative). The importance of X-ray examination for diagnostics of these diseases. The concept of respiratory failure. Spirometry, recording technique. Control lesson on respiratory diseases.	**Theoretical part:** Symptomatology of bronchial asthma. Asthmatic status: clinical presentation, diagnostics, emergency care. Hydrothorax, pneumothorax. Symptomatology of pleurisy (dry and exudative). The importance of X-ray examination for diagnostics of these diseases. **Practical part:** Supervision of thematic patients. Checking the acquisition of competencies (testing, interviews on situational tasks).	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Interactive survey Situational tasks Border control	5
21.	The concept of rheumatism, clinical manifestations, laboratory diagnostics. Symptomatology of mitral heart defects: stenosis of the left atrioventricular orifice, mitral valve insufficiency. Tricuspid valve insufficiency. Changes in ECG, PCG, EchoCG and their importance for diagnosing heart defects.	**Theoretical part:** The concept of rheumatism, clinical manifestations, laboratory diagnostics. Symptomatology of mitral heart defects: stenosis of the left atrioventricular orifice, mitral valve insufficiency. Hemodynamic disturbances in mitral heart defects. Tricuspid valve insufficiency. Changes in ECG, PCG, EchoCG and their importance for diagnosing heart defects.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3.	Testing Frontal survey Interactive survey Situational tasks Control of practical skills	5

		Practical part: Supervision of thematic patients. Design of the workbook.	PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.		
22.	Symptomatology of aortic heart defects: changes in hemodynamics, main symptoms and mechanisms of their development. Changes in ECG, PCG, EchoCG and their importance for diagnostics of aortic heart defects. Pulse properties.	**Theoretical part:** Symptomatology of aortic heart defects: changes in hemodynamics, main symptoms and mechanisms of their development. Principles of diagnostics of congenital stenosis of the aortic orifice. Methods of instrumental diagnostics of stenosis of the aortic orifice and aortic valve insufficiency: PCG, ECG, EchoCG, cardiac radiography. **Practical part:** Supervision of thematic patients. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Situational tasks Control of practical skills	55
23.	Symptomatology of arterial hypertension. Hypertension, stages, clinical features, diagnostics, changes in the fundus. Symptomatic hypertension. Methodology for determining arterial pressure. Hypertensive crises: clinical features,	**Theoretical part:** Symptomatology of arterial hypertension. Hypertension, stages, clinical features, diagnostics. Symptomatic hypertension. Methodology for determining arterial pressure. Hypertensive crises: clinical features,	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1,	Testing Frontal survey Interactive survey Situational	5

	diagnostics. Emergency care for hypertensive crises.	diagnostics. Emergency care for hypertensive crises. **Practical part:** Supervision of thematic patients. Design of the workbook.	4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	tasks Control of practical skills	
24.	The concept of atherosclerosis. Risk factors, development mechanism, clinical manifestations of coronary heart disease. Symptomatology of angina pectoris and myocardial infarction. The importance of ECG in the diagnosis of coronary heart disease. ECG changes in myocardial infarction. Complications of myocardial infarction. Emergency care for cardiogenic shock, diagnostics.	**Theoretical part:** The concept of atherosclerosis. Risk factors, development mechanism, clinical manifestations of coronary heart disease. Symptomatology of angina pectoris and myocardial infarction. Main symptoms and mechanisms of their occurrence. Modern laboratory and instrumental methods of research in cardiology. The importance of ECG in the diagnosis of coronary heart disease. ECG changes in myocardial infarction. Complications of myocardial infarction. Emergency care for cardiogenic shock, diagnostics. **Practical part:** Supervision of thematic patients. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Situational tasks Control of practical skills	55
25.	Myocardial diseases: myocarditis, myocardiopathies, myocardial dystrophies. Main clinical symptoms and mechanisms of	**Theoretical part:** Myocardial diseases: myocarditis, cardiomyopathy, myocardial dystrophy,	UK-1. ID: 1.1, 1.2,1.5	Testing Frontal survey	5

	their occurrence.	features of the course in children. Main clinical symptoms and mechanisms of their occurrence. Circulatory failure (acute and chronic). Mechanisms of development. Methods of clinical, laboratory, instrumental diagnostics. Acute left ventricular failure, main symptoms, emergency care. **Practical part:** Supervision of thematic patients. Design of the workbook.	OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Interactive survey Situational tasks Control of practical skills	
26.	Circulatory failure (acute and chronic). Mechanisms of development. Methods of clinical, laboratory, instrumental diagnostics. Acute left ventricular failure, main symptoms, emergency care. Control lesson on diseases of the circulatory system.	**Theoretical part:** Mechanisms of development. Methods of clinical, laboratory, instrumental diagnostics. Acute left ventricular failure. **Practical part:** Supervision of thematic patients. Checking the acquisition of competencies (testing, interviews on situational tasks).	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Interactive survey Situational tasks Border control	5

27.	Symptomatology of gastritis, gastric ulcer and duodenal ulcer. Main syndromes: hypersecretory, hyposecretory syndromes of stomach dysfunction, dyspeptic. Mechanisms of occurrence. Gastric juice examination.	**Theoretical part:** Symptomatology of gastritis, gastric ulcer and duodenal ulcer. Main syndromes: hypersecretory, hyposecretory syndromes of stomach dysfunction, dyspeptic. Mechanisms of occurrence. Laboratory and instrumental research methods in gastroenterology. Fractional gastric intubation technique. **Practical part:** Supervision of thematic patients. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Situational tasks Control of practical skills	5
28.	Liver function tests. The role of the liver in the human body. Study of protein, carbohydrate, fat, enzymatic metabolism, bilirubin metabolism.	**Theoretical part:** Liver function tests. The role of the liver in the human body. Study of protein, carbohydrate, fat, enzymatic metabolism, bilirubin metabolism. The importance of changes in liver function tests in the diagnosis of liver and biliary tract diseases. **Practical part:** Examination of duodenal contents. Working with handouts. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3,	Testing survey Interactive survey Case tasks (interpretation of biochemical tests) Situational tasks Control of practical skills	5

			3.4. PC-14.ID:14.1, 14.2.		
29.	Symptomatology of hepatitis and liver cirrhosis. Main liver syndromes: portal hypertension, jaundice, liver failure, hepatosplenic syndrome. Mechanisms of their occurrence. Laboratory and instrumental methods of liver disease diagnostics. Symptomatology of cholecystitis. The importance of ultrasound examination in diagnostics of gallbladder diseases. Examination of duodenal contents. Control lesson on diseases of the digestive system.	**Theoretical part:** Symptomatology of hepatitis and liver cirrhosis. Main liver syndromes: portal hypertension, jaundice, liver failure, hepatosplenic syndrome. Mechanisms of their occurrence. Laboratory and instrumental methods of liver disease diagnostics. Symptomatology of cholecystitis. The importance of ultrasound examination in diagnostics of gallbladder and pancreas diseases. **Practical part:** Supervision of thematic patients. Checking the acquisition of competencies (testing, interviews on situational tasks).	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Interactive survey Situational tasks Border control	5
30.	Functional tests of the kidneys. Urine analysis according to Nechiporenko. Zimnitsky test and Reberg test.	**Theoretical part:** Kidney function tests. Urine analysis according to Nechiporenko. Zimnitsky test and Reberg test. Changes in kidney function tests in various kidney and urinary tract diseases. **Practical part:** Working with handouts. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2,	Testing survey Interactive survey Case tasks (interpretation of biochemical tests)	5

			2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.		
31.	Symptomatology of glomerulonephritis (acute and chronic). Main syndromes: nephrotic, edematous, arterial hypertension syndrome, renal eclampsia, urinary, dysuric. Mechanisms of their occurrence. Chronic pyelonephritis: clinical presentation, diagnostics. Chronic renal failure. Laboratory and instrumental diagnostic methods.	**Theoretical part:** Symptomatology of glomerulonephritis (acute and chronic). Main syndromes: nephrotic, edematous, arterial hypertension syndrome, renal eclampsia, urinary, dysuric. Mechanisms of their occurrence. Chronic pyelonephritis: clinical presentation, diagnostics. Chronic renal failure. Laboratory and instrumental diagnostic methods. **Practical part:** Supervision of thematic patients. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Situational tasks Control of practical skills	5
32.	Symptomatology of anemia and leukemia (acute and chronic). Main syndromes in blood diseases: hemorrhagic, circulatory-hypoxic, hematological. Laboratory and instrumental research methods.	**Theoretical part:** Symptomatology of anemia and leukemia (acute and chronic). Main syndromes in blood diseases: hemorrhagic, circulatory-hypoxic, hematological. Features of the course of	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3.	Testing Frontal survey Interactive survey	55

		common blood diseases. Laboratory and instrumental research methods. **Practical part:** Supervision of thematic patients. Design of the workbook.	OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Situational tasks Control of practical skills	
33.	Symptomatology of endocrine system diseases: diabetes mellitus, thyrotoxic goiter, hypothyroidism.	**Theoretical part:** Main symptoms and methods of examination of patients with endocrine diseases and metabolic disorders (diffuse toxic goiter, hypothyroidism, diabetes mellitus, adrenal insufficiency, obesity). Laboratory and instrumental methods of examination. Determination of glucose content in blood and urine, acetone in urine. Glycemic curve. The concept of determining corticosteroids and catecholamines in biological environments of the body. The concept of basal metabolism and methods of its determination. Diagnostic value of radioisotope examination of the thyroid gland. Main indicators of fat and carbohydrate metabolism. **Practical part:** Supervision of thematic patients. Design of the workbook.	UK-1. ID: 1.1, 1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	Testing Frontal survey Interactive survey Situational tasks Control of practical skills	5
34.	Patient supervision. Writing medical	Theoretical part:	UK-1. ID: 1.1,	Examination	4

	histories.	Outline of the medical history. Patient supervision. Writing medical histories.	1.2,1.5 OPK-1. ID: 1.1, 1.2, 1.3. OPC-4:4.1, 4.2,4.3,4.4. OPK-6.ID:6.1,6.2,6.3. PC-2. ID:2.1, 2.2, 2.3, 2.4, 2.5. PC-3. ID:3.1,3.2,3.3, 3.4. PC-14.ID:14.1, 14.2.	medical history. Control practical skills	
Total hours					152

2.4 . Interactive forms of learning

In order to activate students' cognitive activity, interactive teaching methods (interactive survey, small group method, computer simulations, case method), participation in educational and research work are widely used in practical classes.

Topic No. p/p	**Topic of clinical practical classes**	Labor intensity in hours	Interactive form of learning	Labor intensity in hours, in % of the lesson
1.	Introducing students to the clinic. Subject and tasks of propaedeutics of internal diseases. Scheme of the medical history. Questioning and general examination of the patient. Medical ethics and deontology.	4.0	Interactive survey Small group method testing in the Moodle system	20 minutes (0.44 hours) /11.1%
2.	Questioning, general examination of a patient with respiratory diseases. Examination and palpation of the chest. Types of percussion. Methods and techniques of percussion. Topographic percussion of the lungs.	4.0	Interactive survey , small group method	20 minutes (0.44 hours) /11.1%
3.	Comparative percussion of the lungs, methods and techniques for its implementation. Changes in percussion sound in various pathological processes in the lungs.	4.0	Interactive survey , small group method	20 minutes (0.44 hours) /11.1%
4.	Auscultation of the lungs, methods and techniques of its implementation. Vesicular and bronchial breathing in norm and pathology. Bronchophony.	4.0	Interactive survey , small group method, computer simulations	30 minutes (0.66 hours)/ 16.7%
5.	Auscultation of the lungs. Adverse respiratory sounds. Main pulmonary syndromes.	4.0	Interactive survey , small group method, computer simulations, testing in the Moodle system	30 minutes (0.66 hours)/ 16.7%
6.	Questioning and examination of a patient with circulatory diseases. Examination and palpation of large vessels and the heart area. Determination	4.0	Interactive survey , small group method	20 minutes (0.44 hours) /11.1%

	of the properties of the peripheral pulse. Percussion of the heart. Determination of relative, absolute cardiac dullness, width of the vascular bundle, and heart size.			
7.	Auscultation of the heart and blood vessels: methods and techniques. Heart auscultation points. Heart sounds in norm and pathology.	4.0	Interactive survey , small group method, computer simulations	30 minutes (0.66 hours)/ 16.7%
8.	Auscultation of heart murmurs. Functional and organic murmurs, the mechanism of their formation. Pericardial friction murmur, pleuropericardial murmurs. Instrumental methods of examination of the cardiovascular system (PCG, ECG, EchoCG, radiography, radioisotope methods).	4.0	Interactive survey , small group method, computer simulations	30 minutes (0.66 hours)/ 16.7%
9.	A lesson in the simulation and certification center. Simulation and imitation module "Auscultation of the lungs and heart". Control lesson on the methods of patient examination	4.0	Interactive survey , small group method, computer simulations, testing in the Moodle system	30 minutes (0.66 hours)/ 16.7%
10.	Electrocardiography. Principles of electrocardiographic examination. Methodology of ECG recording. Methodology of decoding normal ECG.	4.0	Interactive survey, case method	30 minutes (0.66 hours)/ 16.7%
11.	Electrocardiography. ECG changes in ventricular and atrial myocardial hypertrophy, in myocardial infarction.	4.0	Interactive survey, case method	30 minutes (0.66 hours)/ 16.7%
12.	Electrocardiography. Rhythm and conduction disturbances. The concept of cardiac defibrillation. Class at the simulation and certification center. Simulation and imitation module "Methodology of recording and interpreting	4.0	Interactive survey, case method, computer simulations, testing in the Moodle system	30 minutes (0.66 hours)/ 16.7%

	ECG". Carrying out cardiac defibrillation.			
13.	Questioning, examination of patients with diseases of the digestive organs. Examination of the abdomen. Methods for determining ascites. Palpation of the abdomen (superficial orientation and methodical deep sliding palpation according to V.P. Obraztsov and N.D. Strazhesko).	4.0	Interactive survey , small group method	20 minutes (0.44 hours) /11.1%
14.	Questioning and examination of patients with liver and biliary tract diseases. Percussion, palpation of the liver and spleen.	4.0	Interactive survey, small group method	30 minutes (0.66 hours)/ 16.7%
15.	Questioning and examination of patients with urinary tract diseases. Percussion and palpation of the kidneys and bladder.	4.0	Interactive survey, small group method, testing in the Moodle system	15 minutes (0.33 hours) /8.3%
16.	Laboratory lesson: examination of peripheral blood and urine. Diagnostic value.	4.0	Interactive survey, small group method case method	30 minutes (0.66 hours)/ 16.7%
17.	Laboratory lesson: examination of sputum, pleural fluid, feces, duodenal and gastric contents. Diagnostic value.	4.0	Interactive survey, small group method, case method, testing in the Moodle system	30 minutes (0.66 hours)/ 16.7%
18.	Symptomatology of pneumonia. Mechanism of occurrence of clinical symptoms. Methods of clinical, laboratory and instrumental diagnostics of these diseases. Changes in blood tests in pneumonia. Importance of X-ray and bronchoscopic examinations in diagnostics of lung diseases .	5.0	Interactive survey, small group method	20 minutes (0.44 hours)/ 8.9%
19.	Symptomatology of acute and chronic bronchitis. The concept of COPD. Bronchiectasis, main symptoms, mechanism of their occurrence. Lung abscess, clinical presentation, laboratory and instrumental	5.0	Interactive survey, small group method	20 minutes (0.44 hours)/ 8.9%

	diagnostics. The importance of sputum examination in pulmonology. Pulmonary emphysema. The concept of pulmonary heart. Modern methods of laboratory and instrumental diagnostics. The importance of echo-Dopplercardiography in the diagnosis of pulmonary heart.			
20.	Symptomatology of bronchial asthma. Asthmatic status: clinical presentation, diagnostics, emergency care. Hydrothorax, pneumothorax. Symptomatology of pleurisy (dry and exudative). The importance of X-ray examination for diagnostics of these diseases. The concept of respiratory failure. Spirometry, recording technique. Control lesson on respiratory diseases.	5.0	Interactive survey, small group method, testing in the Moodle system	20 minutes (0.44 hours)/ 8.9%
21.	The concept of rheumatism, clinical manifestations, laboratory diagnostics. Symptomatology of mitral heart defects: stenosis of the left atrioventricular orifice, mitral valve insufficiency. Tricuspid valve insufficiency. Changes in ECG, PCG, EchoCG and their importance for diagnosing heart defects.	5.0	Interactive survey, small group method	20 minutes (0.44 hours)/ 8.9%
22.	Symptomatology of aortic heart defects: changes in hemodynamics, main symptoms and mechanisms of their development. Changes in ECG, PCG, EchoCG and their importance for diagnostics of aortic heart defects. Pulse properties.	5.0	Interactive survey, small group method	20 minutes (0.44 hours)/ 8.9%
23.	Symptomatology of arterial hypertension. Hypertension, stages, clinical features, diagnostics, changes in the fundus. Symptomatic hypertension. Methodology for determining arterial	5.0	Interactive survey, small group method	20 minutes (0.44 hours)/ 8.9%

	pressure. Hypertensive crises: clinical features, diagnostics. Emergency care for hypertensive crises.			
24.	The concept of atherosclerosis. Risk factors, development mechanism, clinical manifestations of coronary heart disease. Symptomatology of angina pectoris and myocardial infarction. The importance of ECG in the diagnosis of coronary heart disease. ECG changes in myocardial infarction. Complications of myocardial infarction. Emergency care for cardiogenic shock, diagnostics.	5.0	Interactive survey, small group method	20 minutes (0.44 hours)/ 8.9%
25.	Myocardial diseases: myocarditis, myocardiopathies, myocardial dystrophies. Main clinical symptoms and mechanisms of their occurrence.	5.0	Interactive survey, small group method	20 minutes (0.44 hours)/ 8.9%
26.	Circulatory failure (acute and chronic). Mechanisms of development. Methods of clinical, laboratory, instrumental diagnostics. Acute left ventricular failure, main symptoms, emergency care. Control lesson on diseases of the circulatory system.	5.0	Interactive survey, small group method, testing in the Moodle system	20 minutes (0.44 hours)/ 8.9%
27.	Symptomatology of gastritis, gastric ulcer and duodenal ulcer. Main syndromes: hypersecretory, hyposecretory syndromes of stomach dysfunction, dyspeptic. Mechanisms of occurrence. Gastric juice examination.	5.0	Interactive survey, small group method, testing in the Moodle system	15 minutes (0.33 hours)/ 6.7%
28.	Liver function tests. The role of the liver in the human body. Study of protein, carbohydrate, fat, enzymatic metabolism, bilirubin metabolism.	5.0	Interactive survey, small group method, case method, testing in the Moodle system	20 minutes (0.44 hours)/ 8.9%

29.	Symptomatology of hepatitis and liver cirrhosis. Main liver syndromes: portal hypertension, jaundice, liver failure, hepatosplenic syndrome. Mechanisms of their occurrence. Laboratory and instrumental methods of liver disease diagnostics. Symptomatology of cholecystitis. The importance of ultrasound examination in diagnostics of gallbladder diseases. Examination of duodenal contents. Control lesson on diseases of the digestive system.	5.0	Interactive survey, small group method, case method, testing in the Moodle system	20 minutes (0.44 hours)/ 8.9%
30.	Functional tests of the kidneys. Urine analysis according to Nechiporenko. Zimnitsky test and Reberg test.	5.0	Interactive survey, small group method case method	20 minutes (0.44 hours)/ 8.9%
31.	Symptomatology of glomerulonephritis (acute and chronic). Main syndromes: nephrotic, edematous, arterial hypertension syndrome, renal eclampsia, urinary, dysuric. Mechanisms of their occurrence. Chronic pyelonephritis: clinical presentation, diagnostics. Chronic renal failure. Laboratory and instrumental diagnostic methods.	5.0	Small group method, testing in the Moodle system	15 minutes (0.33 hours)/ 6.7%
32.	Symptomatology of anemia and leukemia (acute and chronic). Main syndromes in blood diseases: hemorrhagic, circulatory-hypoxic, hematological. Laboratory and instrumental research methods.	5.0	Interactive survey, small group method, case method, testing in the Moodle system	20 minutes (0.44 hours)/ 8.9%
33.	Symptomatology of endocrine system diseases: diabetes mellitus, thyrotoxic goiter, hypothyroidism.	5.0	Interactive survey, small group method, testing in the Moodle system	20 minutes (0.44 hours)/ 8.9%
34.	Patient care. Writing a medical history	4.0	Peer review of case reports. Protection of case reports , testing in the	30 minutes (0.66 hours)/ 16.7%

			Moodle system	

2.5. Criteria for assessing students' knowledge

The assessment of learning outcomes is carried out in accordance with the “Regulations on the assessment system for the learning outcomes of students of the Federal State Budgetary Educational Institution of Higher Education Amur State Medical Academy of the Ministry of Health of Russia”.

The basis for determining the level of knowledge, skills, and abilities are the assessment criteria - completeness and correctness:

- correct, precise answer;
- correct, but incomplete or inaccurate answer;
- incorrect answer;
- no answer.

When assigning marks, the classification of errors and their quality are taken into account:

- gross errors;
- similar errors;
- minor errors;
- shortcomings.

Criteria for assessing learning outcomes

No. p/p	Topic of the practical lesson	Theoretical Czech part	Practical Czech part	Overall rating
1.	Introducing students to the clinic. Subject and tasks of propaedeutics of internal diseases. Scheme of the medical history. Questioning and general examination of the patient. Medical deontology.	2-5	2-5	2-5
2.	Questioning, general examination of a patient with respiratory diseases. Examination and palpation of the chest. Types of percussion. Methods and techniques of percussion. Topographic percussion of the lungs.	2-5	2-5	2-5
3.	Comparative percussion of the lungs, methods and techniques for its implementation. Changes in percussion sound in various pathological processes in the lungs.	2-5	2-5	2-5
4.	Auscultation of the lungs, methods and techniques of its implementation. Vesicular and bronchial breathing in norm and pathology. Bronchophony.	2-5	2-5	2-5
5.	Auscultation of the lungs. Adverse respiratory sounds. Main pulmonary syndromes.	2-5	2-5	2-5
6.	Questioning and examination of a patient with circulatory diseases. Examination and palpation of large vessels and the heart area. Determination of the properties of the peripheral pulse. Percussion of the heart. Determination of relative, absolute cardiac dullness, width of the vascular bundle, and heart size.	2-5	2-5	2-5
7.	Auscultation of the heart and blood vessels:	2-5	2-5	2-5

	methods and techniques. Heart auscultation points. Heart sounds in norm and pathology.			
8.	Auscultation of heart murmurs. Functional and organic murmurs, the mechanism of their formation. Instrumental methods of examination of the cardiovascular system (PCG, ECG, EchoCG, radiography, radioisotope methods).	2-5	2-5	2-5
9.	A lesson in the simulation and certification center. Simulation and imitation module "Auscultation of the lungs and heart". Control lesson on the methods of patient examination.	2-5	2-5	2-5
10.	Electrocardiography. Principles of electrocardiographic examination. Methodology of ECG recording. Methodology of decoding normal ECG.	2-5	2-5	2-5
11.	Electrocardiography. ECG changes in ventricular and atrial myocardial hypertrophy, in myocardial infarction.	2-5	2-5	2-5
12.	Electrocardiography. Rhythm and conduction disturbances. The concept of cardiac defibrillation. Class at the simulation and certification center. Simulation and imitation module "Methodology of recording and interpreting ECG". Carrying out cardiac defibrillation.	2-5	2-5	2-5
13.	Questioning, examination of patients with diseases of the digestive organs. Examination of the abdomen. Methods for determining ascites. Palpation of the abdomen (superficial orientation and methodical deep sliding palpation according to V.P. Obraztsov and N.D. Strazhesko).	2-5	2-5	2-5
14.	Questioning and examination of patients with liver and biliary tract diseases. Percussion, palpation of the liver and spleen.	2-5	2-5	2-5
15.	Questioning and examination of patients with urinary tract diseases. Percussion and palpation of the kidneys and bladder.	2-5	2-5	2-5
16.	Laboratory lesson: examination of peripheral blood and urine. Diagnostic value.	2-5	2-5	2-5
17.	Laboratory lesson: examination of sputum, pleural fluid, feces, duodenal and gastric contents. Diagnostic value.	2-5	2-5	2-5
18.	Symptomatology of pneumonia. Methods of clinical, laboratory and instrumental diagnostics of these diseases. Changes in blood tests in pneumonia.	2-5	2-5	2-5
19.	Symptomatology of acute and chronic bronchitis. The concept of COPD. Bronchiectatic disease, main symptoms, mechanism of their occurrence. Lung abscess, clinical picture. Pulmonary emphysema. The concept of pulmonary heart. Modern methods of laboratory and instrumental diagnostics.	2-5	2-5	2-5

20.	Symptomatology of bronchial asthma. Asthmatic status: clinical presentation, diagnostics, emergency care. Hydrothorax, pneumothorax. Symptomatology of pleurisy. Concept of insufficiency of external respiration function. Spirometry, recording technique. Control lesson on respiratory diseases.	2-5	2-5	2-5
21.	The concept of rheumatism, clinical manifestations, laboratory diagnostics. Symptomatology of mitral heart defects. Tricuspid valve insufficiency. Changes in ECG, PCG, EchoCG and their importance for diagnosing heart defects.	2-5	2-5	2-5
22.	Symptomatology of aortic heart defects. Changes in ECG, PCG, EchoCG and their importance for diagnostics of aortic heart defects. Pulse properties.	2-5	2-5	2-5
23.	Symptomatology of arterial hypertension. Hypertension, stages, clinical features, diagnostics, changes in the fundus. Symptomatic hypertension. Hypertensive crises: clinical features, diagnostics. Emergency care for hypertensive crises.	2-5	2-5	2-5
24.	The concept of atherosclerosis. Symptomatology of angina pectoris and myocardial infarction. ECG changes in myocardial infarction. Emergency care for cardiogenic shock, diagnostics.	2-5	2-5	2-5
25.	Myocardial diseases: myocarditis, myocardiopathies, myocardial dystrophies. Main clinical symptoms and mechanisms of their occurrence.	2-5	2-5	2-5
26.	Circulatory failure (acute and chronic). Control lesson on diseases of the circulatory system.	2-5	2-5	2-5
27.	Symptomatology of gastritis, gastric ulcer and duodenal ulcer. Gastric juice examination.	2-5	2-5	2-5
28.	Liver function tests. The role of the liver in the human body. Study of protein, carbohydrate, fat, enzymatic metabolism, bilirubin metabolism.	2-5	2-5	2-5
29.	Symptomatology of hepatitis and liver cirrhosis. Main liver syndromes. Control lesson on diseases of the circulatory system.	2-5	2-5	2-5
30.	Functional tests of the kidneys. Urine analysis according to Nechiporenko. Zimnitsky test and Reberg test.	2-5	2-5	2-5
31.	Symptomatology of glomerulonephritis. Main syndromes: nephrotic, edematous. Chronic pyelonephritis: clinical presentation, diagnostics. Laboratory and instrumental diagnostic methods.	2-5	2-5	2-5
32.	Symptomatology of anemia and leukemia. Main syndromes. Laboratory and instrumental research methods.	2-5	2-5	2-5

33.	Symptomatology of endocrine system diseases: diabetes mellitus, thyrotoxic goiter, hypothyroidism.	2-5	2-5	2-5
34.	Patient care. Writing a case history	2-5	2-5	2-5
Average score				

Rating scales for ongoing knowledge control

The success of students in mastering the discipline "Propaedeutics of Internal Diseases" is determined by the quality of mastering knowledge, skills and practical abilities, and is assessed on a 5-point scale: "5" - excellent, "4" - good, "3" - satisfactory, "2" - unsatisfactory.

Evaluation criteria

Quality of development	**Mark on a 5-point scale**
90 - 100%	"5"
80 - 89%	"4"
70 - 79%	"3"
less than 70%	"2"

Incoming inspection

Conducted during the first lesson, includes testing in the Moodle system
Access mode: **https://educ-amursma.ru/course/view.php?id=58**
The test control includes questions on the disciplines studied in the previous courses.

Current control

Current control includes initial and final control of knowledge.
Initial control **is** carried out by the teacher at the beginning of each lesson in the form of a frontal survey and solution of situational problems.
Final control – includes control over the methodology for performing practical skills and drawing up a protocol , testing in the Moodle system.
Access mode for 5th semester: https://educ-amursma.ru/course/view.php?id=58
Access mode for 6th semester: https :// educ - amursma . ru / course / view . php ? id = 175
The final grade during the current knowledge assessment is given on the day of the lesson, as the arithmetic mean result for all types of activities provided for in the given lesson of the discipline’s work program.

Assessment criteria (grades) of the theoretical part

“5” - for the depth and completeness of mastery of the content of the educational material, in which the student easily navigates, for the ability to connect theoretical questions with practical ones, express and justify their judgments, and present the answer competently and logically.
“4” - the student has fully mastered the educational material, is oriented in it, and correctly expresses the answer, but the content and form have some inaccuracies.

“3” - the student has mastered the knowledge and understanding of the main provisions of the educational material, but presents it incompletely, inconsistently, and does not know how to express and substantiate his judgments.
“2” - the student has fragmented and unsystematic knowledge of the educational material, is unable to distinguish between the main and the secondary, makes mistakes in defining concepts, distorts their meaning, and presents the material in a disorderly and uncertain manner.

Test control evaluation criteria

“5” - allows up to 10% of incorrect answers during testing.
“4” - allows up to 20% of incorrect answers during testing.
"3" - allows up to 30% of incorrect answers during testing
“2” - allows more than 30% of incorrect answers during testing.

Assessment criteria for the practical part

“5” - the student, while supervising thematic patients, has fully mastered the practical skills and abilities provided for by the work program of the discipline (correctly interprets the patient’s complaints, anamnesis, data from an objective examination, and additional research methods).
“4” – the student, while supervising thematic patients, has mastered the practical skills and abilities provided for by the work program of the discipline, but allows for some inaccuracies.
“3” - the student possesses only some practical skills and abilities when supervising thematic patients.
“2” - the student, when supervising thematic patients, has only some practical skills and abilities, and performs them with gross errors.

Criteria for evaluation of educational medical history

“5” – preparation of the educational medical history in accordance with the requirements.
“4” - in the educational medical history, the student makes some inaccuracies in the formulation of a detailed clinical diagnosis or examination.
“3” - the medical history is filled out with errors, there are inaccuracies in the formulation of the detailed clinical diagnosis and examination of the patient.
“2” - the medical history is written with gross errors (data from an objective examination and additional research methods do not correspond to the established clinical diagnosis).

Working off disciplinary debts

If a student misses a class for a valid reason, he/she has the right to make it up and receive the maximum grade provided for by the course work program for that class. A valid reason must be documented.

If a student misses a class for an unjustified reason or receives a "2" mark for all activities in the class, he/she is required to make it up. In this case, the mark received for all activities is multiplied by 0.8.

If a student is excused from a class at the request of the dean's office (participation in sports, cultural and other events), then he is given a grade of "5" for this class, provided that he submits a report on the completion of mandatory extracurricular independent work on the topic of the missed class.

Assessment criteria for midterm assessment

Interim certification is carried out in 3 stages:

1. Test control in the "Moodle" system
Access mode for 5th semester: https://educ-amursma.ru/course/view.php?id=58
Access mode for 6th semester: https :// educ - amursma . ru / course / view . php ? id = 175
2. Passing practical skills (competencies).
3. Answers to exam tickets.

Criteria for final assessment (midterm assessment)

"5" excellent - for the depth and completeness of mastering the content of the educational material, in which the student easily navigates, for the ability to connect theoretical questions with practical ones, express and justify their judgments, correctly and logically present the answer; when testing, allows up to 10% of erroneous answers. Practical skills and abilities provided for by the working program of the discipline are fully mastered.
"4" good - the student has fully mastered the educational material, is oriented in it, correctly states the answer, but the content and form have some inaccuracies; during testing allows up to 20% of erroneous answers. Has fully mastered the practical skills and abilities provided by the working program of the discipline, but allows some inaccuracies
"3" satisfactory - the student has mastered the knowledge and understanding of the main provisions of the educational material, but presents it incompletely, inconsistently, does not know how to express and justify his/her judgments; during testing, allows up to 30% of erroneous answers. Has only some practical skills and abilities.
"2" unsatisfactory - the student has fragmented and unsystematic knowledge of the educational material, is unable to distinguish between the main and secondary, makes mistakes in defining concepts, distorts their meaning, presents the material in a disorderly and uncertain manner, and makes more than 30% of erroneous answers during testing. Performs practical skills and abilities with gross errors.

A student can claim to receive an "excellent" grade automatically if he/she has won a prize in disciplinary or interdisciplinary Olympiads (university, regional) and has an average grade for the current academic performance of at least 4.8 points **.** A student can refuse the "automatic" grade and take the test together with the group on a general basis.

Assessment criteria for midterm assessment (5th semester)

Stages	**Mark out of 5 point scale**	**Binary scale**
Test control in the Moodle system	3-5	**passed**
Complete completion of the practical part of the course	3-5	
Delivery of practical skills (control of the formation of competencies)	3-5	
Test control in the Moodle system	2	**not credited**
Complete completion of the practical part of the course	2	
Delivery of practical skills (control of the formation of competencies)	2	

Assessment criteria for midterm assessment (6th semester)

Stages	**Mark out of 5 point scale**	**Mark on a 5-point scale**
Test control in the Moodle system	3-5	

Complete completion of the practical part of the course	3-5	**5 – "excellent"** **4 - "good"** **3 – "satisfactory"**
Delivery of practical skills (control of the formation of competencies)	3-5	
Test control in the Moodle system	2	**unsatisfactory**
Complete completion of the practical part of the course	2	
Delivery of practical skills (control of the formation of competencies)	2	

2.6. Independent work of students: in-class and out-of-class

Independent work of students consists of two components: classroom and extracurricular (mandatory for all students and optional) work.

Independent classroom work of students

Students' independent work in the classroom makes up 25% of the time allocated for the lesson. Classroom work includes **:** the main didactic tasks of independent work of students under the guidance of a teacher: consolidation of knowledge and skills acquired during the study of the academic discipline in lectures and practical classes; prevention of their forgetting; expansion and deepening of educational material; formation of the ability and skills of independent work; development of independent thinking and creative abilities of students.

The students' classroom work includes: checking their current knowledge on the topic of the practical lesson in the form of an oral and written survey, test control, solving situational problems, working at the patient's bedside, drawing up patient examination protocols, interpreting laboratory and instrumental indicators. Familiarization with the department's available methodological manuals, tables, diagrams, stands, tablets. Supervision of patients and drawing up an educational medical history, practicing practical skills and abilities in the SAC. Individual work with mastering and performing practical skills.

Extracurricular independent work of students

The following can be used as the main forms of extracurricular independent work: studying the main and additional educational and scientific literature; solving situational problems, test assignments, working in an Internet class; preparing oral reports; writing an educational case history; observing and self-observing specific clinical phenomena being studied, etc. This type of educational activity should be based on the activity, initiative, consciousness and self-activity of students.

Extracurricular independent work of students

Item No.	**Topic of the clinical practical lesson**	**Time for student preparation for the lesson**	**Forms of extracurricular independent work of a student**	
			Mandatory and the same for all students	**At the student's choice**

1.	Introducing students to the clinic. Subject and tasks of propaedeutics of internal diseases. Scheme of the medical history. Questioning and general examination of the patient. Medical ethics and deontology.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Preparation of abstracts and presentations for classes: 1. Founders of the Russian therapeutic school. 2. The role of ASMA scientists in the development of medical science. 3. The role of the environment in the development of diseases of internal organs. 4. Healthy lifestyle and health status of the population.
2.	Questioning, general examination of a patient with respiratory diseases. Examination and palpation of the chest. Types of percussion. Methods and techniques of percussion. Topographic percussion of the lungs.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution (or compiling) situational problems, test assignments, writing recipes, algorithms, completing assignments based on a sample, filling out a medical history, workbook, working in an	Abstract review or computer presentation on the topics: 1. The role of bad habits in the development of respiratory diseases. 2. Diagnostic value of changes in the boundaries of the lungs in pathology of the respiratory organs.

			Internet classroom.	
3.	Comparative percussion of the lungs, methods and techniques for its implementation. Changes in percussion sound in various pathological processes in the lungs.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms) Solution (or compiling) situational problems, test assignments, writing recipes, algorithms, completing assignments based on a sample, filling out a medical history, workbook, working in an Internet classroom.	Abstract review or computer presentation on the topic: 1. Types of percussion sound in the norm and in various pathological processes in the lungs
4.	Auscultation of the lungs, methods and techniques of its implementation. Vesicular and bronchial breathing in norm and pathology. Bronchophony.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments	Abstract review or computer presentation on the topics: 1. Bronchial breathing in norm and pathology. 2. Features of changes in the respiratory system in patients with COPD

			based on the sample design of a medical history, workbook, work in an Internet classroom.	
5.	Auscultation of the lungs. Adverse respiratory sounds. Main pulmonary syndromes.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Types of adverse respiratory sounds, diagnostic significance. 2. Features of changes in the respiratory system in the syndrome of compaction of lung tissue.
6.	Questioning and examination of a patient with circulatory diseases. Examination and palpation of large vessels and the heart area. Determination of the properties of the peripheral pulse. Percussion of the heart. Determination of relative, absolute cardiac dullness, width of the vascular bundle, and heart size.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history,	Abstract review or computer presentation on the topics: 1. Methodology for studying arterial pulse and its properties. 2. Diagnostic significance of changes in the borders of the heart in .

			workbook, work in an Internet classroom.	
7.	Auscultation of the heart and blood vessels: methods and techniques. Heart auscultation points. Heart sounds in norm and pathology.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1.Phases of cardiac activity. 2. Features of heart tones in the norm and in various diseases of the cardiovascular system.
8.	Auscultation of heart murmurs. Functional and organic murmurs, the mechanism of their formation. Pericardial friction murmur, pleuropericardial murmurs. Instrumental methods of examination of the cardiovascular system (PCG, ECG, EchoCG, radiography, radioisotope methods).	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Diagnostic significance of the occurrence of heart murmurs. 2. Recognition of functional and organic heart murmurs. 3. Phonocardiography for mitral and aortic heart defects.

9.	A lesson in the simulation and certification center. Simulation and imitation module "Auscultation of the lungs and heart". Control lesson on the methods of patient examination	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Preparing presentations for classes: 1. Auscultation of the lungs. Types of vesicular breathing in norm and pathology. 2. Auscultation of the heart. Changes in tones in heart defects.
10.	Electrocardiography. Principles of electrocardiographic examination. Methodology of ECG recording. Methodology of decoding normal ECG.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. History of the development of ECG. 2. Methodology for ECG registration.

11.	Electrocardiography. ECG changes in ventricular and atrial myocardial hypertrophy, in myocardial infarction.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: Features of ECG changes in arterial hypertension and pulmonary hypertension (PH).
12.	Electrocardiography. Rhythm and conduction disturbances. The concept of cardiac defibrillation. Class at the simulation and certification center. Simulation and imitation module "Methodology of recording and interpreting ECG". Carrying out cardiac defibrillation.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Features of ECG in bundle branch block. 2. Features of ECG in atrioventricular block.

13.	Questioning, examination of patients with diseases of the digestive organs. Examination of the abdomen. Methods for determining ascites. Palpation of the abdomen (superficial orientation and methodical deep sliding palpation according to V.P. Obraztsov and N.D. Strazhesko).	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Features of pain syndrome in patients with stomach diseases. 2. Method of abdominal palpation. Diagnostic value.
14.	Questioning and examination of patients with liver and biliary tract diseases. Percussion, palpation of the liver and spleen.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1.Types of jaundice. Diagnostic value. 2. Hepatosplenomegaly syndrome.

15.	Questioning and examination of patients with urinary tract diseases. Percussion and palpation of the kidneys and bladder.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Dysuria syndrome. 2. Nephrotic syndrome.
16.	Laboratory lesson: examination of peripheral blood and urine. Diagnostic value.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1.Anemic syndrome. 2. Features of changes in clinical blood tests in leukemia.

17.	Laboratory lesson: examination of sputum, pleural fluid, feces, duodenal and gastric contents. Diagnostic value.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Features of changes in sputum analysis in various lung diseases. 2. Diagnostic significance of changes in pleural fluid parameters.
18.	Symptomatology of pneumonia. Mechanism of occurrence of clinical symptoms. Methods of clinical, laboratory and instrumental diagnostics of these diseases. Changes in blood tests in pneumonia. Importance of X-ray and bronchoscopic examinations in diagnostics of lung diseases .	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Modern classification and symptomatology of pneumonia. 2. The diagnostic value of X-ray and bronchoscopic studies in the diagnosis of lung diseases .

19.	Symptomatology of acute and chronic bronchitis. The concept of COPD. Bronchiectasis, main symptoms, mechanism of their occurrence. Lung abscess, clinical presentation, laboratory and instrumental diagnostics. The importance of sputum examination in pulmonology. Pulmonary emphysema. The concept of pulmonary heart. Modern methods of laboratory and instrumental diagnostics. The importance of echo-Dopplercardiography in the diagnosis of pulmonary heart.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Concept and symptoms of COPD. 2. The importance of ECG and EchoCG in the diagnosis of pulmonary heart disease.
20.	Symptomatology of bronchial asthma. Asthmatic status: clinical presentation, diagnostics, emergency care. Hydrothorax, pneumothorax. Symptomatology of pleurisy (dry and exudative). The importance of X-ray examination for diagnostics of these diseases. The concept of respiratory failure. Spirometry, recording technique. Control lesson on respiratory diseases.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Modern classification and symptomatology of bronchial asthma. 2. Asthmatic status: clinical presentation, diagnostics, emergency care. 3. The concept of insufficiency of the external respiratory function. Spirometry.

21.	The concept of rheumatism, clinical manifestations, laboratory diagnostics. Symptomatology of mitral heart defects: stenosis of the left atrioventricular orifice, mitral valve insufficiency. Tricuspid valve insufficiency. Changes in ECG, PCG, EchoCG and their importance for diagnosing heart defects.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. The concept of rheumatism, clinical manifestations, laboratory diagnostics. 2. Symptomatology of mitral heart defects: stenosis of the left atrioventricular orifice, mitral valve insufficiency.
22.	Symptomatology of aortic heart defects: changes in hemodynamics, main symptoms and mechanisms of their development. Changes in ECG, PCG, EchoCG and their importance for diagnostics of aortic heart defects. Pulse properties.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Symptomatology of aortic heart defects. 2. Changes in ECG, PCG, EchoCG and their importance for diagnosing aortic heart defects.
23.	Symptomatology of arterial hypertension. Hypertension, stages, clinical features, diagnostics, changes in the	2 hours	Preparation on theoretical issues (lecture reading, primary and	Abstract review or computer presentation on the topics:

	fundus. Symptomatic hypertension. Methodology for determining arterial pressure. Hypertensive crises: clinical features, diagnostics. Emergency care for hypertensive crises.		secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	1. Definition, classification, symptomatology of arterial hypertension.
24.	The concept of atherosclerosis. Risk factors, development mechanism, clinical manifestations of coronary heart disease. Symptomatology of angina pectoris and myocardial infarction. The importance of ECG in the diagnosis of coronary heart disease. ECG changes in myocardial infarction. Complications of myocardial infarction. Emergency care for cardiogenic shock, diagnostics.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Symptomatology of angina pectoris and myocardial infarction. 2. Complications of myocardial infarction. Emergency care for cardiogenic shock, diagnostics.
25.	Myocardial diseases: myocarditis, myocardiopathies, myocardial dystrophies. Main clinical symptoms and mechanisms of their occurrence.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendation	Abstract review or computer presentation on the topics: 1. Symptomatology of cardiomyopathies. 2. Definition,

			s, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	classification and symptomatology of myocarditis.
26.	Circulatory failure (acute and chronic). Mechanisms of development. Methods of clinical, laboratory, instrumental diagnostics. Acute left ventricular failure, main symptoms, emergency care. Control lesson on diseases of the circulatory system.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendation s, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Acute left ventricular failure, main symptoms, emergency care. 2. Chronic circulatory failure syndrome.
27.	Symptomatology of gastritis, gastric ulcer and duodenal ulcer. Main syndromes: hypersecretory, hyposecretory syndromes of stomach dysfunction, dyspeptic. Mechanisms of occurrence. Gastric juice examination.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendation s, abstracting, drawing up notes, diagrams, algorithms, etc.).	Abstract review or computer presentation on the topics: 1. Gastric dyspepsia syndrome. 2. Symptoms of complications of peptic ulcer disease .

			Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	
28.	Liver function tests. The role of the liver in the human body. Study of protein, carbohydrate, fat, enzymatic metabolism, bilirubin metabolism.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1.Types of jaundice and their diagnostic significance. 2. Study of protein, carbohydrate, fat, and enzymatic metabolism.
29.	Symptomatology of hepatitis and liver cirrhosis. Main liver syndromes: portal hypertension, jaundice, liver failure, hepatosplenic syndrome. Mechanisms of their occurrence. Laboratory and instrumental methods of liver disease diagnostics. Symptomatology of cholecystitis. The importance of ultrasound examination in diagnostics of gallbladder diseases. Examination of duodenal contents. Control lesson on diseases of	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing	Abstract review or computer presentation on the topics: 1. Chronic liver failure syndrome. 2. Laboratory and instrumental methods for diagnosing liver diseases.

	the digestive system.		assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	
30.	Functional tests of the kidneys. Urine analysis according to Nechiporenko. Zimnitsky test and Reberg test.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Renal function tests. Diagnostic value. 2. Modern methods of diagnosing chronic kidney disease.
31.	Symptomatology of glomerulonephritis (acute and chronic). Main syndromes: nephrotic, edematous, arterial hypertension syndrome, renal eclampsia, urinary, dysuric. Mechanisms of their occurrence. Chronic pyelonephritis: clinical presentation, diagnostics. Chronic renal failure. Laboratory and instrumental diagnostic methods.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms, etc.). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical	Abstract review or computer presentation on the topics: 1. Symptomatology of glomerulonephritis. 2. Symptomatology of chronic kidney disease. Modern diagnostic methods.

			history, workbook, work in an Internet classroom.	
32.	Symptomatology of anemia and leukemia (acute and chronic). Main syndromes in blood diseases: hemorrhagic, circulatory-hypoxic, hematological. Laboratory and instrumental research methods.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1.Symptomatology of anemia. 2.Symptomatology leukemia .
33.	Symptomatology of endocrine system diseases: diabetes mellitus, thyrotoxic goiter, hypothyroidism.	2 hours	Preparation on theoretical issues (lecture reading, primary and secondary literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithms). Solution situational tasks, test assignments, completing assignments based on the sample design of a medical history, workbook, work in an Internet classroom.	Abstract review or computer presentation on the topics: 1. Symptomatology of diabetes mellitus. 2. Symptomatology of thyrotoxicosis and hypothyroidism .

34.	Patient care. Writing a medical history	2 hours	Preparation for the credit lesson, preparation of the medical history, preparation for the defense of the medical history	Preparation of medical history, workbook, preparation for medical history defense
Labor intensity in hours		**68**	**68**	**40**
Total labor intensity (in hours)			**108**	

2.7. Research (project) work

Research (project) work of students (RWS) is a mandatory section of the discipline and is aimed at the comprehensive formation of universal, general professional and professional competencies of students. RWS involves the study of specialized literature and other scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge, participation in scientific research, etc.

The topic of research work can be chosen by students independently in consultation with the teacher or from the list below (taking into account the scientific direction of the department).

List of recommended research paper topics:

1. Risk factors for cardiovascular diseases in patients with diabetes mellitus.
2. Features of the course of acute coronary syndrome in young and elderly people.
3. Arterial hypertension and features of the course of the disease in special groups of patients.
3. Features of the course of acute coronary syndrome in patients with COPD.
4. Changes in pulmonary hemodynamics in patients with COPD complicated by chronic pulmonary heart disease.

Criteria for assessing students' research (project) work:

- the material on the results of the research in the report is presented in detail, the specialized literature is well-developed, scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge is studied - "passed".
- the material on the results of the research in the report is not presented accurately enough, the special literature is poorly studied, the scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge is not studied - "failed".

III . EDUCATIONAL, METHODOLOGICAL, MATERIAL AND TECHNICAL AND INFORMATION SUPPORT OF DISCIPLINE

3.1. Main literature

1. Butov, M.A. Propaedeutics of Internal Diseases: textbook / M.A. Butov. - 2nd ed., corrected. and add. Moscow: GEOTAR-Media, 2024. - 584 p. - ISBN 978-5-9704-8262-9, DOI: 10.33029/9704-8262-9-PD-2024-1-584. - Electronic version is available on the website of the electronic library system "Student Consultant": [site]. URL:

https://www.studentlibrary.ru/book/ISBN9785970482629.html (date of access: 10/30/2024). - Access mode: by subscription. - Text: electronic
2. Mukhin, N. A. Propaedeutics of internal diseases: textbook / N. A. Mukhin, V. S. Moiseev. - 2nd ed. , rev. and additional - Moscow: GEOTAR-Media, 2023. - 848 p. - ISBN 978-5-9704-7981-0. - Text: electronic // EBS “Student Consultant”: [website]. - URL: https://www.studentlibrary.ru/book/ISBN9785970479810.html (access date: 11/07/2024). - Access mode: by subscription.
3. Ivashkin, V. T. Propaedeutics of Internal Diseases: textbook / V. T. Ivashkin. - 2nd ed., revised and enlarged. - Moscow: GEOTAR-Media, 2023. - 936 p. - ISBN 978-5-9704-7691-8, DOI: 10.33029/9704-7691-8-PRO-2023-1-936. - Electronic version is available on the website of the Electronic Library System "Student Consultant": [site]. URL: https://www.studentlibrary.ru/book/ISBN9785970476918.html (date of access: 07.11.2024). - Access mode: by subscription. - Text: electronic https://amurgma.ru/obuchenie/biblioteki/biblioteka-amurskoy-gma/)

3.2. Further reading

1. Main syndromes of internal diseases: a textbook / E. V. Reznik, A. P. Baranov, P. A. Mogutova [et al.]; under the supervision of E. V. Reznik. - Moscow: GEOTAR-Media, 2024. - 264 p. - ISBN 978-5-9704-8373-2, DOI: 10.33029/9704-8373-2-SID-2024-1-264. - An electronic version is available on the website of the electronic library system "Student Consultant": [site]. URL: https://www.studentlibrary.ru/book/ISBN9785970483732.html (date of access: 10/30/2024). - Access mode: by subscription. - Text: electronic
2. Propaedeutics of Internal Diseases: Rules for Collecting anamnesis: a tutorial / V. N. Oslopov, Yu. - Moscow: GEOTAR-Media, 2024. - 240 p. - ISBN 978-5-9704-8127-1, DOI: 10.33029/9704-8127-1-IDP-2024-1-240. - An electronic version is available on the website of the Electronic Library System "Student Consultant": [site]. URL: https://www.studentlibrary.ru/book/ISBN9785970481271.htm l (date of access: 10/30/2024). - Access mode: by subscription. - Text: electronic
3. Propaedeutics of Internal Diseases. Semiotics. Collection of Test Tasks: Study Guide / E. V. Reznik, E. N. Banzelyuk, A. P. Baranov [et al.]; under the supervision of E. V. Reznik. - Moscow: GEOTAR-Media, 2024. - 184 p. - ISBN 978-5-9704-8244-5, DOI: 10.33029/9704-8244-5-PAS-2024-1-184. - Electronic version is available on the website of the Electronic Library System "Student Consultant": [site]. URL: https://www.studentlibrary.ru/book/ISBN9785970482445.html (accessed: 10/30/2024). - Access mode: by subscription. - Text: electronic.
4. Statsenko, M. E. Propaedeutics of Internal Diseases: a textbook / M. E. Statsenko, S. V. Turkina, I. A. Tyshchenko. - Volgograd: VolgGMU, 2022. - Part 6: Hematology: hematopoietic system, formed elements - 2022. - 148 p. - Text: electronic // Lan: electronic library system. - URL: https://e.lanbook.com/book/295799 (date of access: 03/13/2023). - Access mode: for authorized users. https://amurgma.ru/obuchenie/biblioteki/biblioteka-amurskoy-gma/

3.3. Educational and methodological support for the discipline prepared by the department staff:

1. Clinic, diagnostics, principles of treatment and prevention of arterial hypertension / Edited by prof. Menshikova I.G. - Blagoveshchensk, 2015. - 164 p. Access mode: https :// educ - amursma . ru / course / view . php ? id = 175
2. Clinic, diagnostics, principles of treatment with the basics of physical rehabilitation of patients with acute myocardial infarction / Edited by prof. Menshikova I.G. - Blagoveshchensk, 2015. - 144 p. Access mode:

https :// educ - amursma . ru / course / view . php ? id =175

3. Modern aspects of the clinic and diagnostics of chronic pulmonary heart disease: Textbook / Edited by prof. I.G. Menshikova. - Blagoveshchensk, 2018.-85 p., 2020.-85 p. Access mode:
   https :// educ - amursma . ru / course / view . php ? id =175
4. General clinical methods of laboratory diagnostics / Edited by prof. Menshikova I.G., prof. Dobrykh V.N. - Blagoveshchensk, Khabarovsk, 2012. - 107 p.: ill. Access mode: https://educ-amursma.ru/course/view.php?id=58
5. Fundamentals of clinical electrocardiography / Edited by prof. Menshikova I.G. - Blagoveshchensk-Khabarovsk, 2010. - 100 p. Access mode: https://educ-amursma.ru/course/view.php?id=58
6. Main clinical syndromes in the course of propaedeutics of internal diseases /Edited by prof. Menshikova I.G. – Blagoveshchensk-Vladivostok, 2010. – 51 p. Access mode: https://educ-amursma.ru/course/view.php?id=58
7. Features of the course and rational therapy of community-acquired pneumonia during the epidemic of influenza A (H 1 N 1): Methodical recommendations / Edited by prof. Menshikova I.G. - Blagoveshchensk, 2011.-26 p. Access mode:
   https :// educ - amursma . ru / course / view . php ? id =175
8. Classification, clinical features and modern diagnostic methods of anemia and leukemia/Edited by prof. Menshikova I.G.-Blagoveshchensk, 2020.-117 p. Access mode:
   https :// educ - amursma . ru / course / view . php ? id =175

Electronic and digital technologies:

1. **Multimedia presentations** for lectures, posted in the Electronic Information System of the Federal State Budgetary Educational Institution of Higher Education Amur State Medical Academy:
   Access mode for 5th semester : https://educ-amursma.ru/course/view.php?id=58

- Russian therapeutic schools.
- Questioning and examination of patients with cardiovascular diseases.
- Questioning and examination of patients with respiratory diseases.
- Questioning, examination of patients with diseases of the digestive organs
  Questioning, examination of patients with diseases of the urinary system
  Access mode for 6th semester : https :// educ - amursma . ru / course / view . php ? id = 175
- Symptomatology of pneumonia.
- Symptomatology of bronchial asthma.
- Symptomatology of aortic heart defects.
- The concept of rheumatism. Symptomatology of mitral heart defects.
- Symptomatology of tricuspid insufficiency.
- Symptomatology of peptic ulcer and chronic gastritis.
- Symptomatology of kidney diseases. Main renal syndromes.
- ECG is normal. Principles of vector ECG analysis.
- ECG in case of myocardial hypertrophy and infarction.
- ECG for heart rhythm and conduction disorders.
- The concept of atherosclerosis. Symptomatology of coronary heart disease. Clinic, diagnostics of angina pectoris, myocardial infarction.
- Symptomatology of arterial hypertension. Hypertension, symptomatic arterial hypertension.
- Symptomatology of liver diseases. Main liver syndromes.
- Symptomatology of endocrine system diseases.
- Symptomatology of blood diseases.

2. **Video materials:**

Videos:
- Percussion of the lungs.
- Auscultation of the lungs.
- Percussion of the heart.
- Auscultation of the heart.
- Fundamentals of clinical electrocardiography.
- Clinical blood test.
- Fundamentals of clinical laboratory hematology.
- Heart defects.
- Clinical hematology.

3. **Educational visual aids:**
Thematic tables for clinical practical classes.
Laboratory research kit :
- Hemoglobinometers Sali.
- Mixers for red blood cells.
- Mixers for leukocytes.
- Panchenkov's devices.
- Panchenkov's capillaries.
- Urometers.
- Glass.
- Burger counting chambers with Goryaev grid.

Albums:
- ECG diagnostics of myocardial infarction.
- ECG diagnostics of heart rhythm disturbances.
- ECG diagnostics of extrasystoles.

Stands:
- Outline of the medical history.
- Methodology for examining a patient.
- Mitral heart defects.
- Aortic heart defects.
- Symptomatology of jaundice.

Set of radiographs:
- For respiratory diseases.
- For diseases of the circulatory system.

Case tasks:
- ECG and PCG sets , spirograms, radiographs.
- Sets of clinical and biochemical tests of blood, urine, sputum, pleural fluid, duodenal and gastric juice, coprogram.
- Archival medical records.

4. **Electronic teaching aids** :
(posted on the website of the Federal State Budgetary Educational Institution of Higher Education Amur State Medical Academy.

Access mode: https://www.amursma.ru/zakrytaya-chas t -sayta/3-kurs/)

3.4 Equipment used for the educational process

Name	**Quantity**
Classrooms 1-6	
School board	5

Table	29
Chairs	121
Couch	4
Thematic stands	6
Thematic tables	30
Sets of r radiographs of mothers	6
Folder-booklet with sets of blood, urine, stool and pleural fluid tests	6
ECG kits	6
Electrocardiograph 12-channel ECG9110k (Japan)	1
Electrocardiograph 6-channel SHILLER CARDIOVITAT–2 PLUS (Switzerland)	1
Multimedia projector SANY OPLC-SL20	1
Personal computer	3
Laptop	1
Equipment of the State Autonomous Healthcare Institution of the Joint-Stock Company "Blagoveshchensk City Clinical Hospital" used for training students in the functional department, X-ray room	
X-ray tomograph CT GEBRIGHTSPEED 16 SLICE (Germany)	1
Ultrasound device "Aloka" 3500 (Japan)	1
Fibrogastroscope "Olympus GIF-Q3", "Olympus GIF-Q4" (Japan)	1
Fiber bronchoscope "PentonEB-18p"	1
X-ray machine "Electron" (Russia)	1
Spirograph “SuperSpiro” (UK)	1
Electrolyte analyzer "CibaCorning" (UK)	1
Biochemical analyzer "VTS-370" (Spain)	1
Hematology analyzer ADVIA-60 (Germany).	1
Classrooms for conducting simulation classes in the accreditation and simulation center	
Table	9
Chairs	16
Treatment table	2
Closet	1
Medical bed	1
Computer	1
Multimedia projector	1
Video monitoring and recording system for the simulation training process	2
Laptop	1
Auscultation mannequin with the ability to simulate the auscultatory picture of various diseases	1
Auscultation trainer with smartoscope	1
A simulator for training in performing blood pressure measurement skills	1
Patient simulator simulating an adult male for ECG skills training	1
Changing table	1
Lecture hall No. 2 of the Federal State Budgetary Educational Institution of Higher Education Amur State Medical Academy	
Table	1
Seating	340
Blackboard	1
Laptop	1
Multimedia projector	1

Hall for conducting midterm assessment	
Tables	4
Seating	40
Couch	2

3.5. Professional databases, information and reference systems, electronic educational resources

Resource name	Resource Description	Access	Resource address
Electronic library systems			
"Student consultant. Electronic library of the medical university"	For students and teachers of medical and pharmaceutical universities. Provides access to electronic versions of textbooks, teaching aids and periodicals.	Remote access after registration under the university profile	https://www.studentlibrary.ru/
Reference and information system "MedBaseGeotar".	The reference and information system "MedBaseGeotar" is intended for practicing medical specialists, researchers, teachers, postgraduate students, residents, senior students, and healthcare managers for the rapid search, selection, and reading of medical literature necessary for work in a single data source.	Remote access after registration under the university profile	https://mbasegeotar.ru/pages/index.html
Electronic library system "Bookup"	Large medical library - information and educational platform for the joint use of electronic educational, educational and methodological publications of medical universities of Russia and the CIS countries	Remote access after registration under the university profile	https://www.books-up.ru/
EBS "Lan"	Network electronic library of medical universities - an electronic database of educational and scientific works on medical topics, created for the purpose of implementing network forms of professional educational programs, open access to educational materials for partner universities	Remote access after registration under the university profile	https://e.lanbook.com/
Scientific electronic library "CyberLeninka"	CyberLeninka is a scientific electronic library built on the paradigm of open science (Open Science), the main tasks of which are the popularization of science and scientific activity, public control of the quality of scientific publications, the development of interdisciplinary research, a modern institute of scientific review, increasing the citation of Russian science and building a knowledge infrastructure. Contains more than 2.3 million scientific articles.	free access	https://cyberleninka.ru/
Oxford Medicine Online	A collection of Oxford medical publications, bringing together over 350 titles into a single, cross-searchable resource. Publications include The Oxford Handbook of	free access	http://www.oxfordmedicine.com

	Clinical Medicine and The Oxford Textbook of Medicine, both of which are continually updated electronically.		
Human Biology Knowledge Base	Reference information on physiology , cell biology , genetics , biochemistry , immunology , pathology . (Resource of the Institute of Molecular Genetics of the Russian Academy of Sciences .)	free access	http://humbio.ru/
Medical online library	Free reference books, encyclopedias, books, monographs, abstracts, English-language literature, tests.	free access	https://www.medlib.ru/library/library/books
Information systems			
Clinical Guidelines Rubricator	A resource of the Russian Ministry of Health that contains clinical recommendations developed and approved by medical professional non-profit organizations of the Russian Federation, as well as methodological guidelines, nomenclatures and other reference materials.	link to download the application	https://cr.minzdrav.gov.ru/#!/
Federal Electronic Medical Library (FEMB)	The Federal Electronic Medical Library is part of the unified state information system in the field of healthcare as a reference system . FEMB was created on the basis of the funds of the Central Scientific Medical Library named after I.M. Sechenov.	free access	https://femb.ru/
Russian Medical Association	Professional Internet resource. Objective: to promote effective professional activity of medical personnel. Contains the charter, personnel, structure, rules of entry, information about the Russian Medical Union.	free access	http://www.rmass.ru/
Web-medicine	The site presents a catalog of professional medical resources, including links to the most authoritative subject sites, journals, societies, as well as useful documents and programs. The site is intended for doctors, students, employees of medical universities and scientific institutions.	free access	http: //webmed.irkutsk.ru/
Databases			
World Health Organization	The site contains news, statistics on countries that are members of the World Health Organization, fact sheets, reports, WHO publications and much more.	free access	http://www.who.int/ru/
Ministry of Science and Higher Education of the Russian Federation	The website of the Ministry of Science and Higher Education of the Russian Federation contains news, newsletters, reports, publications and much more	free access	http://www.minobrnauki.gov.ru
Ministry of Education of the Russian Federation	The website of the Ministry of Education of the Russian Federation contains news,	free access	https://edu.gov.ru/

	newsletters, reports, publications and much more		
Federal portal "Russian education"	A single window for access to educational resources. This portal provides access to textbooks on all areas of medicine and health care.	free access	http: //www .edu.ru/
Polpred.com	Electronic library system Business media. Media Review	free access	https://polpred.com/news
Bibliographic databases			
Database "Russian Medicine"	It is created in the Central Scientific and Methodological Library and covers the entire collection, starting from 1988. The database contains bibliographic descriptions of articles from domestic journals and collections, dissertations and their abstracts, as well as domestic and foreign books, collections of institute proceedings, conference materials, etc. Thematically, the database covers all areas of medicine and related areas of biology, biophysics, biochemistry, psychology, etc.	free access	https://rucml.ru/
PubMed	A text database of medical and biological publications in English. The PubMed database is an electronic search engine with free access to 30 million publications from 4,800 indexed journals on medical topics. The database contains articles published from 1960 to the present day, including information from MEDLINE, PreMEDLINE, NLM. Each year, the portal is replenished with more than 500 thousand new works.	free access	https :// pubmed . ncbi . nlm . nih . gov /
eLIBRARY.RU	Russian information portal in the field of science, technology, medicine and education, containing abstracts and full texts of more than 13 million scientific articles and publications. The eLIBRARY.RU platform provides electronic versions of more than 2,000 Russian scientific and technical journals, including more than 1,000 open access journals.	Full functionality of the site is available after registration	http://elibrary.ru/defaultx.asp
Electronic library of dissertations (RSL)	Currently, the Electronic Library of Dissertations of the Russian State Library contains more than 919,000 full texts of dissertations and abstracts.	free access	http://diss.rsl.ru/?menu=disscatalog/
Medline.ru	Medical and biological portal for specialists. Biomedical journal.	free access	https://journal.scbmt.ru/jour/index
Official Internet portal of legal information	The single official state information and legal resource in Russia	free access	http://pravo.gov.ru/

3.6.Licensed and freely distributed software used in the educational process

List of software (commercial software products)

No. p/p	List of software (commercial software products)	Details of supporting documents
1.	MS Operating System Windows 7 Pro	License number 48381779
2.	MS Operating System Windows 10 Pro	CONTRACT No. UT-368 from 09.21.2021
3 .	MS Office	License number: 43234783, 67810502, 67580703, 64399692, 62795141, 61350919
4.	Kaspersky Endpoint Security for Business – Standard Russian Edition. 50-99 Node 1 year Educational Renewal License	Agreement No. 7 AA dated 02/07/2025
5.	1C Accounting and 1C Salary	LICENSE AGREEMENT 612/L dated 02.02.2022 (additional licenses)
6.	1C: PROF University	LICENSE AGREEMENT No. KrTsB-004537 dated 12/19/2023
7.	1C: PROF Library	LICENSE AGREEMENT No. 2281 dated 11.11.2020
8.	Consultant Plus	Contract No. 41AA dated 12/27/2024
9.	Contour.Tolk	Agreement No. K213753/24 dated 13.08.2024
10.	E-learning environment 3KL (Russian Moodle)	Agreement No. 1362.5 dated November 20, 2024
11.	Astra Linux Common Edition	Agreement No. 142 A dated September 21, 2021
12.	Information system "Plans"	Agreement No. 2873-24 dated June 28, 2024
13.	1C: Document Management	Agreement No. 2191 dated 10/15/2020
14.	R7-Office	Agreement No. 2 KS dated 12/18/2020
15.	License "OS ROSA CHROME workstation"	Agreement No. 88A dated 08/22/2024
16.	Alt Virtualization Server 10 (for secondary specialized and higher professional education)	Agreement No. 14AK dated 09/27/2024
17.	Dr.Web Desktop Security Suite Comprehensive protection + Control Center for 12 months.	Agreement No. 8 dated October 21, 2024
18.	Software "Schedule for educational institutions"	Agreement No. 82A dated July 30, 2024

List of freely distributed software

No. p/p	List of freely distributed software	Links to license agreement
1.	Yandex Browser	Freely distributed License agreement for the use of Yandex Browser programs https://yandex.ru/legal/browser_agreement/
2.	Yandex.Telemost	Freely distributed License Agreement for the Use of Programs https://yandex.ru/legal/telemost_mobile_agreement/
3.	Dr.Web CureIt!	Freely distributed License Agreement: https://st.drweb.com/static/new-www/files/license_CureIt_ru.pdf
4.	OpenOffice	Freely distributed License: http://www.gnu.org/copyleft/lesser.html
5.	LibreOffice	Freely distributed License: https://ru.libreoffice.org/about-us/license/
6.	VK Calls	Freely distributed https://vk.com/license
7.	Kaspersky Free Antivirus	Freely distributed https://products.s.kaspersky-labs.com/homeuser/Kaspersky4Win2021/21.16.6.467/english-0.207.0/3830343439337c44454c7c4e554c4c/kis_eula_en-in.txt

3.7. Resources of the information and telecommunications network "Internet"

1. **Replace the Amur State Medical Academy library e-mail address with** https://amurgma.ru/obuchenie/biblioteki/biblioteka-amurskoy-gma/

2. **The e-mail address of the Electronic Library System "Student Consultant" should be replaced with**

https://www.studentlibrary.ru

IV . ASSESSMENT TOOLS FUND

4.1. Current test control (input, initial, output), final.

4.1.1. Examples of entrance control test tasks (with standard answers)

Test assignments are located in the Moodle system
Access mode for 5th semester: https://educ-amurs m a.ru/course/view.php?id=58
Total number of tests – 100.

1. INDICATE THE ANATOMICAL STRUCTURE LOCATED IN THE CENTER OF THE PULMONARY SEGMENT.
   1) segmental artery
   2) segmental vein
   3) lobar bronchus
   4) lobar vein
2. INDICATE THE PROJECTION OF THE APEX OF THE RIGHT LUNG ON THE BODY SURFACE
   1) at the level of the spinous process of the 7th cervical vertebra
   2) 3-4 cm above the collarbone
   3) 3-4 cm above the second rib
   4) 6 cm above the collarbone
3. SPECIFY THE LOCATION OF THE PROJECTION OF THE PULMONARY TRUNK OPENING ONTO THE ANTERIOR CHEST WALL IN AN ADULT.
   1) above the attachment of the third left rib to the sternum
   2) above the attachment of the fourth left rib to the sternum
   3) sternum at the level of the 3rd ribs
   4) sternum at the level of the 4th ribs

Standards of correct answers
The correct answer is 1.

4.1.2. Examples of test tasks for initial knowledge assessment (with standard answers)

Test assignments are located in the Moodle system
Access mode: for 5th semester: https://educ-amursma.ru/course/view.php?id=58
Total number of tests – 100.

1. EMPHYSEMA OF THE LUNGS IS
   1) increased airiness and decreased elasticity of lung tissue
   2) decreased elasticity of alveolar tissue
   3) increasing the airiness of the alveoli
   4) decrease in alveolar airiness
2. VESICULAR BREATHING WITH PROLONGED EXPIRATION IS HEARD WHEN
   1) Bronchospasm
   2) Narrowing (spasm) of the glottis
   3) The presence of an obstruction in the large bronchi
   4) Inflammatory compaction of lung tissue
3. THE HEIGHT OF THE STANDING APEX OF THE LUNGS IN A HEALTHY PERSON ALONG THE ANTERIOR SURFACE
   1) 3-4 cm
   2) 3-8 cm

3) 5-6 см
4) 6-7 cm

Standards of correct answers
The correct answer is 1.

Access mode for 6th semester: https :// educ - amursm a . ru / course / view . php ? id = 175
Total number of tests – 100.

1. POLYURIA IS :
   1) increase in daily diuresis
   2) decrease in daily diuresis
   3) painful urination
   4) urination at night
2. THE LEFT BORDER OF RELATIVE CARDIAC DULLNESS SHIFTS TO THE LEFT WHEN
   1) Aortic stenosis
   2) Mitral stenosis
   3) Tricuspid valve insufficiency
   4) Stenosis of the right atrioventricular orifice
3. AN INCREASED FIRST TONE IN THE AREA OF THE APICAL IMPULSE IS HEARD WHEN
   1) Mitral stenosis
   2) Mitral insufficiency
   3) Tricuspid insufficiency
   4) Aortic stenosis

Standards of correct answers:
The correct answer is 1

4.1.3. Examples of test tasks for final knowledge assessment (with standard answers)
Test assignments are located in the Moodle system
Access mode: for 5th semester: https://educ-amursma.ru/course/view.php?id=58
Total number of tests – 100.

1. THE UPPER LIMIT OF RELATIVE CARDIAC DULLNESS SHIFTS UPWARD WHEN
   1) Mitral stenosis
   2) Aortic stenosis
   3) Aortic valve insufficiency
   4) Tricuspid valve insufficiency

2. THE LEFT BORDER OF RELATIVE CARDIAC DULLNESS SHIFTS TO THE LEFT WHEN
   1) Aortic stenosis
   2) Mitral stenosis
   3) Tricuspid valve insufficiency
   4) Stenosis of the right atrioventricular orifice
3. AN INCREASED FIRST TONE IN THE AREA OF THE APICAL IMPULSE IS HEARD WHEN
   1) Mitral stenosis
   2) Mitral insufficiency
   3) Tricuspid insufficiency
   4) Aortic stenosis

Access mode for 6th semester: https :// educ - amursma . ru / course / view . php ? id = 175
The total number of test tasks is 100.

1. WHEN EXAMINING THE ABDOMEN, THE "HEAD OF MEDUSA" IS OBSERVED IN THE SYNDROME:
   1) portal hypertension
   2) gastric dyspepsia
   3) arterial hypertension
   4) intestinal dyspepsia
2. THE REGISTRATION OF A PATHOLOGICAL Q WAVE DURING MYOCARDIAL INFARCTION INDICATES THE PRESENCE OF A ZONE IN THE MYOCARDIUM:
   1) Necrosis
   2) ischemic injury
   3) ischemia
   4) necrosis and ischemic damage
3. MITRAL VALVE INSUFFICIENCY IS CHARACTERIZED BY
   1) Systolic murmur at the apex
   2) Strengthening the first tone at the top
   3) Diastolic murmur at the apex
   4) The emergence of the quail rhythm

Standards of correct answers:
The correct answer is 1.

4.1.4. Test control of the final level of knowledge (interim assessment)
Conducted by the Moodle system
(Access mode for 5th semester: https://educ-amursma.ru/course/view.php?id=58
The total number of test tasks is 100.

1. PATHOLOGICAL BRONCHIAL BREATHING IS CHARACTERISTIC OF THE SYNDROME
   1) Lung tissue compactions
   2) Increased airiness of the lung tissue
   3) Obstructive atelectasis
   4) Fluid accumulation in the pleural cavity
2. DISTINCTIVE FEATURES OF CREPITUS
   1) Listening at the height of inspiration
   2) Listening on inhalation and exhalation
   3) Changes after coughing
   4) Listening over the entire surface of the lungs
3. AIRWAY OBSTRUCTION IS BEST REFLECTED BY
   1) Forced expiratory volume in one second (FEV)
   2) Residual volume
   3) Diffusion capacity
   4) Maximum lung ventilation (MLV)

Access mode for 6th semester: https://educ-amursma.ru/course/view.php?id=175)
The total number of test tasks is 100.

1. A PQ PROLONGATION OF 0.28 S ON THE ECG INDICATES THAT THE PATIENT HAS
   1) Atrioventricular conduction block of the first degree
   2) Sinoatrial conduction block
   3) Atrioventricular conduction block II degree
   4) Atrioventricular conduction block grade III
2. HEPATIC JAUNDICE IS CHARACTERIZED BY
   1) Increased concentration of direct and indirect bilirubin in the blood
   2) Absence of stercobilin in feces
   3) Increased concentration of indirect bilirubin in the blood
   4) No bilirubin in urine
3. URINE THE COLOR OF "MEAT SLOPS" IS TYPICAL FOR
   1) Acute glomerulonephritis
   2) Chronic glomerulonephritis
   3) Chronic pyelonephritis
   4) Acute cystitis

Standards of correct answers:
The correct answer is 1.

1.2. Examples of situational tasks (with standard answers)

Situational tasks are located in the Moodle system
Access mode: for 5th semester: https://educ-amursma.ru/course/view.php?id=58
The total number of test tasks is 40.

1. PATIENT K. COMPLAINS OF DYSPNEA WITH DIFFICULTY INHALING. ON EXAMINATION: THE RIGHT HALF OF THE CHEST LAGS IN THE ACT OF BREATHING, THE RESPIRATORY RATE IS 36 PER 1 MINUTE. ON THE RIGHT UNDER THE SCAPULA, THE VOCAL FREMITUS IS SHARPLY WEAKENED, THE PERCUSSION SOUND IS DULL, THE LOWER BORDER OF THE LUNGS IS DISPLACED UPWARD.
   ANSWER THE QUESTIONS:
   1) What kind of breathing sounds are heard during auscultation of the lungs?
   2) how will bronchophony change?
   3) What kind of pulmonary syndrome can we think of?
   Answer:
   1) vesicular weakened breathing;
   2) bronchophony is weakened;
   1) pleural fluid accumulation syndrome.

2. PATIENT S., 56 YEARS OLD, COMPLAINS OF AN INCREASE IN THE VOLUME OF THE ABDOMEN, EDEMA OF THE LOWER EXTREMITIES, WEIGHT LOSS. FROM THE ANAMNESIS: FOR MANY YEARS, HE HAS BEEN ABUSING ALCOHOL. AN OBJECTIVE EXAMINATION REVEALS ICTERUS OF THE SKIN, MUCOUS MEMBRANES AND SCLERA. ON THE UPPER HALF OF THE BODY, "VASCULAR SPIDERS" ARE DETECTED; ERYTHEMA OF THE CHEEKBONES AND PALMAR ERYTHEMA IS NOTED. THE ABDOMEN IS ENLARGED IN VOLUME, IN THE SUPINE POSITION IT ACQUIRES A "FROG" SHAPE, THE NAVEL IS PROTRUDING, THERE IS A PRONOUNCED SUBCUTANEOUS VENOUS NETWORK ON THE ANTERIOR ABDOMINAL WALL, EDEMA OF THE LOWER EXTREMITIES. THE LIVER PROTRUDES FROM UNDER THE EDGE OF THE COSTAL ARCH, IS DENSE, TUBEROUS, WITH A SHARP EDGE. ITS DIMENSIONS ACCORDING TO KURLOV ARE 16 ×X 12 ×X 11 CM, THE DIMENSIONS OF THE SPLEEN ARE 14 -X 10 CM. ADDITIONAL RESEARCH DATA: BILIRUBIN 62 MMOL/L (DIRECT 38.5 MMOL/L, INDIRECT 23.5 MMOL/L). THE TEST FOR BILE PIGMENTS IN URINE IS POSITIVE. X-RAY EXAMINATION OF THE ESOPHAGUS IN THE LOWER THIRD REVEALS VARICOSE VEINS.
   ANSWER THE QUESTIONS:
   1) what syndromes were identified in this patient
   2) what disease are these syndromes characteristic of
   Answer:
   1) syndromes: portal hypertension, jaundice, liver signs
   2) cirrhosis

3. PATIENT M. , 50 YEARS OLD, COMPLAINS OF POOR SLEEP, SUPERFICIAL, ANXIOUS, LONG PERIOD OF FALLING ASLEEP, PERIODIC HEADACHES, MORE OFTEN AFTER EMOTIONAL OVERLOADS, BUT SOMETIMES ASSOCIATED WITH CHANGES IN WEATHER, PHYSICAL LOADS, LOCALIZED IN THE EYEBALLS. OBJECTIVELY: SLIGHTLY INCREASED NUTRITION, IN LUNGS THERE ARE NO CHANGES. HEART - SLIGHTLY ENLARGED TO THE LEFT, INCREASED APICAL PUSH, HEART SOUNDS ARE CLEAR, THERE IS AN ACCENTUATION OF THE SECOND SOUND ON THE AORTA. BP -200/110 MM HG. A WEEK LATER, THE PRESSURE DROPPED. URINE ANALYSIS: SPECIFIC GRAVITY - 1020, PROTEIN - NO, SUGAR - NO, P/M: SINGLE LEUKOCYTES, SINGLE SQUAMOUS EPITHELIAL CELLS.
   ANSWER THE QUESTIONS:
   1) what disease can you think of, formulate a diagnosis
   2) how to explain the shift of the borders to the left, the increased apical impulse
   3) explain the mechanism of the accentuation of the second tone on the aorta
   4) what target organs are affected in this patient
   Answer:
   1) hypertension stage III, average risk of hypertension
   2) left ventricular hypertrophy
   3) increased blood pressure in the aorta
   4) heart, central nervous system

Access mode for 6th semester: https :// educ - amursma . ru / course / view . php ? id = 175
The total number of test tasks is 40.

1. THE PATIENT COMPLAINS OF SHORTNESS OF BREATH, PAIN IN THE RIGHT HALF OF THE CHEST. ON EXAMINATION: THE RIGHT HALF OF THE CHEST LAGS IN THE ACT OF BREATHING. THE RESPIRATORY RATE IS 32 A MINUTE.

ON THE RIGHT UNDER THE SHOULDER BLADE, THE VOCAL FREMITUS IS SHARPLY WEAKENED, THE PERCUSSION SOUND IS DULL, THE LOWER BORDER OF THE LUNGS ALONG THE SCAPULAR LINE IS AT THE LEVEL OF THE 7TH RIB, WEAKENED VESICULAR BREATHING, NO SIDE RESPIRATORY SOUNDS. BRONCHOPHONY IS WEAKENED. WHAT PULMONARY SYNDROME CAN WE THINK OF?

1) Pleural fluid accumulation syndrome
2) Pleural gas accumulation syndrome
3) Pulmonary tissue consolidation syndrome
4) Bronchial obstruction syndrome

2. A 65-YEAR-OLD PATIENT DEVELOPED SHARP, PRESSING RETROSTERNAL PAIN RADIATING TO THE LEFT SCAPULA AFTER PHYSICAL EXERTION. THE PAIN WAS RELIEVED BY THE AMBULANCE WITH MORPHINE. ON ADMISSION, THE PATIENT WAS LETHARGIC. THE SKIN WAS PALE, MOIST, THE LIPS WERE CYANOTIC. RESPIRATORY RATE WAS 24 PER MINUTE. BREATHING IN THE LUNGS WAS HARSH. HEART SOUNDS WERE MUFFLED. PULSE WAS 115 PER MINUTE, WEAK. BLOOD PRESSURE WAS 95/65 MM HG. THE LIVER WAS NOT PALPABLE. THERE WAS NO PERIPHERAL EDEMA. ON THE ECG: ST ELEVATION IN LEADS II , III , AVF ; ST DEPRESSION IN LEADS I , AVL , VI , V 2. PRESUMPTIVE DIAGNOSIS
   1) Posterior diaphragmatic myocardial infarction
   2) Pulmonary embolism
   3) Anteriorly distributed myocardial infarction
   4) Anteroseptal myocardial infarction

Standards of correct answers:
The correct answer is 1

4.3. List of practical skills that a student should have after mastering the discipline

1. Methodical questioning of the patient.
2. General examination. Palpation of the lymph nodes. Inspection and palpation of the joints.
3. Examination of the chest.
4. Palpation of the chest.
5. Comparative percussion of the lungs.
6. Topographic percussion of the lungs.
7. Auscultation of the lungs.
8. Examination of the heart area.
9. Palpation of the heart.
10. Percussion of relative and absolute dullness of the heart and vascular bundle.
11. Auscultation of the heart.
12. Examination of veins and arteries.
13. Study of arterial pulse.
14. Determination of blood pressure using the Korotkov method.
15. Examination of the oral cavity and abdomen.
16. Percussion of the abdomen.
17. Superficial orienting palpation of the abdomen.
18. Methodical deep sliding palpation of the abdomen according to the method of V.P. Obraztsov and N.D. Strazhesko.
19. Auscultation of the abdomen.
20. Examination of the liver and spleen area.

21. Percussion of the liver. Determination of the boundaries and size of the liver.
22. Palpation of the liver and gallbladder.
23. Percussion of the spleen.
24. Palpation of the spleen.
25. Examination of the lumbar region and suprapubic area.
26. Percussion of the kidneys and bladder.
27. Palpation of the kidneys and bladder.
28. Palpation of the thyroid gland.
29. Reading and interpreting spirography results.
30. Reading and interpreting sputum analysis.
31. Reading and interpreting pleural fluid analysis.
32. Conducting gastric intubation. Reading and interpreting the results of gastric juice analysis.
33. Conducting duodenal sounding. Reading and interpreting the results of the analysis of duodenal contents.
34. Reading and interpretation of coprological analysis.
35. Reading and interpreting biochemical blood tests (basic indicators).
36. Reading and interpretation of urine tests (general, according to Nechiporenko, according to Zimnitsky).
37. Reading and interpreting clinical blood tests.
38. ECG recording technique.
39. Decoding ECG. Interpretation of the changes found.
40. Decoding of the FCG. Interpretation of the changes found.
41. Preparation of medical history.

4.4. List of questions for the exam

Objective research methods

1. Methodical questioning of the patient.
2. General examination of the patient. Palpation of the lymph nodes. Inspection and palpation of the joints.
3. Counting the respiratory rate. Determination of peripheral and cavity edema.
4. Examination of the chest.
5.Determination of vocal fremitus.
6.Determination of the lower boundaries of the lungs.
7. Determination of the height of the apex of the lungs.
8. Determination of active mobility of the lower pulmonary edge of the lungs.
9. Conducting comparative percussion of the lungs.
10.Determination of the range of lung sound.
11. Technique of auscultation of the lungs.
12. Definition of bronchophony.
13. Examination of the heart area.
14.Determination of the properties of the apex impulse.
15.Determination of the right ventricular impulse and cardiac impulse.
16.Determination of epigastric pulsation and tremor.
17.Determination of the right border of relative cardiac dullness.
18.Determination of the upper limit of relative cardiac dullness.
19.Determination of the left border of relative cardiac dullness.
20.Determination of the boundaries of absolute cardiac dullness.
21.Determination of the right contour of the heart.
22.Definition of the left contour of the heart.
23. Determination of the diameter of the heart (true and expected).

24. Determination of the length of the heart (true and proper).
25.Determination of the width of the vascular bundle.
26. Methods of cardiac auscultation.
27. Study of arterial pulse.
28. Examination of the oral cavity and abdomen.
29. Superficial (orientative) palpation of the abdomen.
30. Palpation of the sigmoid colon.
31. Palpation of the cecum.
32. Palpation of the transverse colon.
33. Methods for determining the lower border of the stomach.
34. Palpation of the greater curvature and pyloric region of the stomach.
35. Palpation of the pancreas.
36. Percussion of the liver.
37.Palpation of the liver.
38. Percussion of the spleen.
39. Palpation of the spleen.
40. Palpation of the kidneys. The tapping symptom
41. Palpation of the thyroid gland.

General propaedeutics

1.Medical ethics and deontology.
2. The role of the environment, tobacco smoking, alcohol abuse, drug addiction in the occurrence of diseases.
3.Russian therapeutic schools.
4.Case history as the main medical document. Anamnesis, history of development. Collection methods.
5. Assessment of the patient's general condition and consciousness. Types of forced positions, diagnostic value.
6. Cyanosis, edema. Types, pathogenesis, diagnostic value.
7. Shortness of breath, cough. Types, pathogenesis, diagnostic value.
8. Percussion. Physical justification, types, methods, conditions of implementation.
9.Classification of percussion sounds, their characteristics.
10. Bronchial breathing in norm and pathology.
11.Vesicular breathing and its physiological varieties .
12. Pathological types of vesicular breathing.
13. Wheezing: dry and wet.
14. Crepitation, pleural friction rub.
15. Heart sounds, differentiation of I and II sounds.
16. Mechanism of formation and characteristics of the first heart sound.
17. Mechanism of formation and characteristics of the second heart sound.
18. Three-member rhythm: quail rhythm, gallop rhythm, pendulum-like rhythm.
19. Heart murmurs. Classification, characteristics. Differentiation organic and functional heart murmurs.
20. Principles of deep methodical palpation according to the Obraztsov-Strazhesko method.
21. The concept of symptom, syndrome, diagnosis.
22. Syndrome of compaction of pulmonary tissue.
23. Syndrome of increased airiness of the lung tissue.
24. Syndrome of gas accumulation in the pleural cavity.
25. Syndrome of fluid accumulation in the pleural cavity.
26. Cavity syndrome.
27. Respiratory failure syndrome.

28.Arterial hypertension syndrome.
29. Syndrome of gastric and intestinal dyspepsia.
30. Portal hypertension syndrome.
31. Jaundice syndrome.
32. Hepato-splenic syndrome.
33. Liver failure syndrome.
34. Syndrome of impaired diuresis.
35.Normal electrocardiogram.
36. ECG signs of ventricular myocardial hypertrophy.
37. ECG signs of acute myocardial infarction.
38. ECG signs of disturbances in the automatism function.
39. ECG signs of extrasystolic arrhythmia.
40. ECG signs of atrioventricular blocks.
41. ECG signs of bundle branch block.
42. ECG signs of atrial fibrillation and atrial flutter.
43.Normal phonocardiography.
44. Changes in PCG in mitral heart defects.
45. Changes in PCG in aortic heart defects.

Private pathology

1. Focal pneumonia. Semiotics and diagnostics.
2. Lobar pneumonia. Semiotics and diagnostics.
3. Chronic bronchitis. Semiotics and diagnostics.
4.Pulmonary emphysema. Semiotics and diagnostics.
5.Bronchial asthma. Semiotics and diagnostics.
6. Lung abscess. Semiotics and diagnostics.
7. Bronchiectatic disease. Semiotics and diagnostics.
8. Pleurisy (dry, exudative). Semiotics and diagnostics.
9. Chronic pulmonary heart disease. Semiotics and diagnostics.
10. Respiratory failure. Classification. Semiotics and diagnostics.
11. Rheumatism. Semiotics and diagnostics.
12. Mitral valve insufficiency. Hemodynamics. Semiotics and diagnostics.
13. Mitral stenosis. Hemodynamics. Semiotics and diagnostics.
14. Aortic valve insufficiency. Hemodynamics. Semiotics and diagnostics.
15. Aortic stenosis. Hemodynamics. Semiotics and diagnostics.
16. Tricuspid valve insufficiency. Hemodynamics. Semiotics and diagnostics.
17.Atherosclerosis. Angina pectoris. Semiotics and diagnostics.
18. Myocardial infarction. Semiotics and diagnostics.
19.Myocardial diseases. Semiotics and diagnostics.
20.Hypertension. Semiotics and diagnostics.
21. Acute cardiac and vascular failure. Emergency care in acute failure.
22. Chronic circulatory failure. Classification. Semiotics and diagnostics.
23. Chronic gastritis. Semiotics and diagnostics.
24. Peptic ulcer of the stomach and duodenum. Semiotics and diagnostics.
25. Chronic hepatitis. Semiotics and diagnostics.
26. Liver cirrhosis. Semiotics and diagnostics.
27. Portal cirrhosis of the liver. Semiotics and diagnostics.
28. Chronic cholecystitis. Semiotics and diagnostics.
29. Chronic pancreatitis. Semiotics and diagnostics.
30. Acute glomerulonephritis. Semiotics and diagnostics.
31. Chronic glomerulonephritis. Semiotics and diagnostics.

32.Nephrotic syndrome. Semiotics and diagnostics.
33. Chronic renal failure. Uremia.
34. Diabetes mellitus. Semiotics and diagnostics.
35. Diffuse toxic goiter. Semiotics and diagnostics.
36. Hypothyroidism. Myxedema.
37.Symptomatology of anemia.
38. Symptomatology of leukemia.

Additional research methods

1.Determination of arterial and venous pressure.
2.Determination of red blood cells. Diagnostic value.
3. Determination of blood hemoglobin and color index.
4. Determination of erythrocyte sedimentation rate. Diagnostic value.
5.Determination of blood leukocytes. Diagnostic value.
6.Determination of the leukocyte formula. Diagnostic value.
7. Urine collection for analysis. General, culture, Nechiporenko and Zimnitsky test.
8.Determination of physical properties of urine. Diagnostic value.
9. Qualitative and quantitative determination of protein in urine. Diagnostic value.
10. Qualitative and quantitative determination of glucose in urine. Diagnostic value.
11. Determination of bile pigments in urine. Diagnostic value
12. Examination of urine sediment. Diagnostic value.
13. Zimnitsky and Nechiporeiko tests. Diagnostic value.
14. Reberg test. Diagnostic value.
15. Method of fractional gastric intubation.
16.Determination of acidity and flow rate of hydrochloric acid. Diagnostic value.
17. Analysis of gastric juice for lactic acid (Uffelman reaction). Diagnostic value.
18. Methodology of duodenal sounding.
19. Microscopic examination of duodenal contents. Diagnostic value.
20. Collection of sputum for analysis. General analysis, culture, for mycobacteria tuberculosis.
21. Analysis of sputum for Mycobacterium tuberculosis (Ziehl-Neelson staining). Diagnostic value.
22. Collection of feces for examination. Coproscopy, feces for helminth eggs, for occult blood.
23. Analysis of feces for occult bleeding (Gregersen reaction). Diagnostic value.
24. Examination of feces for worm eggs.
25. Methodology of pleural puncture, examination of pleural fluid. Diagnostic value.
26. Determination of blood glucose, sugar curve with load. Diagnostic value.
27. Liver function tests characterizing the role of the liver in pigment metabolism.
28. Liver function tests characterizing the role of the liver in carbohydrate and fat metabolism.
29. Liver function tests characterizing the role of the liver in protein metabolism.
30. Liver function tests characterizing the excretory function of the liver and its participation in blood clotting processes.
31. Methodology for recording electrocardiograms and phonocardiograms.
32. Methodology of spirography and pneumotachometry.
33. Instrumental methods for examining respiratory organs.
34. Instrumental methods for examining the circulatory organs.
35. Instrumental methods for examining the digestive organs.
36. Instrumental methods for examining the urinary organs.