MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational Institution
BELARUSIAN STATE MEDICAL UNIVERSITY

APPROVED
by Rector of the Educational Institution «Belarusian State Medical University»
_____ S.P.Rubnikovich
20.11.2024
Reg. # UD-0911-01-14/2425/edu.

PROPAEDEUTICS OF INTERNAL DISEASES

Curriculum of the educational institution in the academic discipline for the specialty

7-07-0911-01 «General Medicine»

2024

Curriculum is based on the educational program «Propaedeutics of Internal Diseases», approved 20.11.2024, registration # УД-0911-01-14/2425/уч.; on the educational plan in the specialty 7-07-0911-01 «General Medicine», approved 15.05.2024, registration # 7-07-0911-01/2425/mf.

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RECOMMENDED FOR APPROVAL:

by the Department of Propaedeutics of Internal Diseases of the Educational Institution «Belarusian State Medical University»
(protocol # 1 of 28.09.2024);

by the Scientific and Methodological Council of the Educational Institution «Belarusian State Medical University»
(protocol # 3 of 20.11.2024)

EXPLANATORY NOTE

«Propaedeutics of Internal Diseases» is the academic discipline of the Therapy Module #1, which provides systematic scientific information about the semiotics of internal organ diseases, techniques of examination of healthy individuals and patients with internal organ diseases.

The aim of the discipline «Propaedeutics of Internal Diseases» is the formation of specialized competencies for examination of healthy individuals and patients with internal organ diseases, including physical, laboratory and instrumental methods of examination; formulation of clinical diagnoses of patients with internal organ diseases; provision of emergency medical care to patients with internal organ diseases.

The objectives of the academic discipline «Propaedeutics of Internal Diseases» are to form students' scientific knowledge about subjective and objective examination techniques, symptoms and syndromes associated with internal organ diseases and techniques for laboratory and instrumental diagnosis. Students will also develop the abilities and skills required to examine patients who have internal organ diseases and the ability to interpret the findings of laboratory and instrumental investigations.

The knowledge, skills and abilities acquired during the study of the academic discipline «Propaedeutics of Internal Diseases» are necessary for the successful study of the following disciplines: «Internal Diseases», «Outpatient Therapy», «Clinical Immunology, Allergology».

Studying the educational discipline «Propaedeutics of Internal Diseases» should ensure the formation of students' specialized competency: carry out clinical examination of patients based on the knowledge about the semiotics of adult.

As a result of studying the discipline «Propaedeutics of Internal Diseases» the student should:

know:

fundamental clinical concepts and terms describing the findings of examinations of patients with diseases of internal organs;

semiotics of complaints in diseases of internal organs;

symptomatology of typical forms of the most prevalent diseases of internal organs;

techniques for subjective and objective examination of patients with diseases of internal organs;

findings of physical examination of a healthy person and a patient with diseases of internal organs;

basic laboratory and instrumental methods of examination in diseases of organs and systems of the body of an adult;

rules of medical ethics and deontology;

be able to:

organize and carry out conversation with individuals suffering from internal disorders;

arrange and carry out an objective examination of patients with diseases of internal organs;

establish a strategy for individuals with internal organ disorders to have laboratory and instrumental examinations;

evaluate and analyze the findings of laboratory tests (urinalysis, complete blood count, biochemical blood analysis, pleural fluid analysis, sputum analysis) and instrumental tests (chest X-ray, electrocardiogram) in case of internal diseases;

master:

methodology for conducting a physical examination of a healthy individual and patients with internal organ diseases (questioning, inspection, palpation, percussion and auscultation);

techniques for assessing the clinical picture in internal organ illnesses that help create clinical thinking.

Total number of hours for the study of the discipline is 336 academic hours, of which 171 classroom hours and 165 hours of student independent work. Classroom hours according to the typed of studies: lectures - 33 hours (including 9 hours of supervised student independent work (SSIW), practical classes – 138 hours.

Intermediate assessment is carried out according to the syllabus of the specialty in the form of a credit (4th and 5th semesters) and an examination (6th semester).

Form of higher education is full–time.

ALLOCATION OF ACADEMIC TIME ACCORDING TO SEMESTERS OF STUDY

Code, name of the specialty	semester	Number of academic hours						Form of intermediate assessment
		total	in-class	including			out-of-class self-studies	
				lectures	supervised student independent work	practicals		
7-07-0911-01 «General Medicine»	4	108	48	9	3	36	60	credit
	5	120	66	9	3	54	54	credit
	6	108	57	6	3	48	51	examination
Total hours		**336**	**171**	**24**	**9**	**138**	**165**	

THEMATIC PLAN

Section (topic) name	Number of class hours	
	lectures	practical
1. Patient's examination methods	**12**	**36**
1.1. Introduction to the academic discipline «Propaedeutics of Internal Diseases». Medical ethics and deontology. Basic concepts of clinical medicine	1,5	2
1.2. Clinical algorithm of patient's examination	-	2
1.3. Communications in medicine. Subjective method of patient's examination	1,5	2
1.4. Objective methods of patient's examination	1,5	4
1.5. Palpation. Types and rules	1,5	6
1.6. Percussion. Types and rules	1,5	6
1.7. Auscultation. Types and rules	1,5	6
1.8. Laboratory tests	1,5	2
1.9. Instrumental diagnostic methods		2
1.10. Clinical basis of electrocardiography. Electrocardiogram recording. Normal electrocardiogram interpretation	1,5	4
2. General propaedeutics (semiotics)	**12**	**54**
2.1. Examination of patients with respiratory diseases	3	9
2.2. Examination of patients with cardiovascular diseases	1,5	9
2.3. Clinical and electrocardiographic signs of heart arrhythmias, conduction disorders, atrial and ventricular hypertrophy	1,5	9
2.4. Examination of patients with gastrointestinal diseases	1,5	9
2.5. Examination of patients with kidney and urinary tract diseases	1,5	9
2.6. Examination of patients with hematologic diseases	1,5	3
2.7. Examination of patients with diseases of the thyroid gland, pancreas (diabetes mellitus). Examination of patients with musculoskeletal system diseases	1,5	6
3. Special propaedeutics (special pathology)	**9**	**48**
3.1. Bronchial asthma. Chronic obstructive pulmonary disease	1,5	3
3.2. Pneumonia. Pleurisy		3
3.3. Acute rheumatic fever. Infective endocarditis	1,5	3
3.4. Heart valve diseases		3
3.5. Arterial hypertension. Atherosclerosis	-	3

Section (topic) name	Number of class hours	
	lectures	practical
3.6. Ischemic heart disease. Angina pectoris. Myocardial infarction	1,5	3
3.7. Acute and chronic heart failure. Cardiac arrhythmias and conduction disorders		3
3.8. Diseases of the digestive system: gastritis, stomach ulcer and duodenal ulcer. Management of gastrointestinal bleeding	1,5	3
3.9. Liver diseases: hepatitis, liver cirrhosis. The concept of gallbladder and pancreas diseases		3
3.10. Kidney diseases: glomerulonephritis, pyelonephritis, acute kidney injury, chronic kidney disease	1,5	3
3.11. Hematologic diseases: anemia, hemoblastosis	1,5	3
3.12. Thyroid diseases, diabetes mellitus. Management of hyperglycemic and hypoglycemic comas	-	3
3.13. Diseases of the musculoskeletal system: arthritis in case of connective tissue diseases (rheumatoid arthritis), infectious arthritis, osteoarthritis, gouty arthritis	-	3
3.14. Acute allergic diseases. Management of anaphylactic shock	-	9
Total hours	**33**	**138**

CONTENT OF THE EDUCATIONAL MATERIAL

1. Patient's examination methods

1.1. Introduction to the academic discipline «Propaedeutics of Internal Diseases». Medical ethics and deontology. Basic concepts of clinical Medicine

The academic discipline «Propaedeutics of Internal Diseases» and its place among other medical academic disciplines. The main objectives of the discipline «Propaedeutics of Internal Diseases». A brief history of the development of the doctrine of internal diseases. Medical ethics and deontology: relationships in the system «doctor-doctor», «doctor-patient», medical and ethical features of professional communication between a doctor and a patient.

The basic concepts of clinical medicine: symptom, syndrome, disease, etiology, pathogenesis, norm, pathology, diagnosis. Types of diagnosis. The methodology of diagnosis.

1.2. Clinical algorithm of patient's examination

Clinical examination techniques that are fundamental (interview, examination, palpation, percussion, auscultation) and supplemental (laboratory, instrumental) general strategy for the patient's examination. The general plan of patient's examination. Diagnostic significance of patient clinical examination techniques in internal organ illnesses. Factors that have an impact on the patient's clinical examination outcomes.

The structure of the hospital patient's medical file. The scheme of the educational case history.

1.3. Communications in medicine. Subjective method of patient's examination

Ability to communicate. Guidelines for speaking with patients. Unique communication challenges with patients in a variety of healthcare settings (cultural and language diversity, altered states of consciousness, violent conduct, etc.).

Subjective examination method (interview): rules for recognizing and systematizing complaints about illnesses of the internal organs, portions of the disease's anamnesis and the patient's life history comprise the subjective technique of examination (questioning).

1.4. Objective methods of patient's examination

Objective methods of examination.

Inspection, its types. Physical justification, rules and inspection techniques.

General inspection. Assessment of vital signs (state of consciousness, pulse, blood pressure, breathing). Assessment of the severity of the patient's condition. The patient's position. Examination of the skin and subcutaneous fat. Examination of mucous membranes. Comparing the biological age to the passport age. Face expression. Nutritional status assessment. Anthropometry. Measurement of the circumference of the abdomen. Body mass index. Gait. Linguistic traits of the patient. Evaluation of the patient's odor. Physique and constitutional types. Anthropometry.

Results of a general examination of a healthy patient.

Local inspection. Inspection of the head, neck. Examination of the oral cavity. Tongue, humidity, color, the nature and severity of the papillary layer, the presence and nature of plaque on the tongue. Inspection of the nose, ears, eyes and hair.

Chest examination. Thoracic topographic lines. Inspection of the thorax when still. Thorax shapes include asthenic, hypersthenic and normosthenic. The magnitude of the epigastric angle, the expression of the supra- and subclavicular fossae and the placement of the shoulder blades and clavicles. The chest's symmetry. Spine's physiological curvature. Mammary glands. Static chest examination's diagnostic usefulness.

Thorax inspection in motion. Chest circumference, chest excursion when breathing. Diagnostic value of deviations from the norm. Breath: type of breathing (thoracic, abdominal, mixed), symmetry of respiratory movements, involvement of accessory muscles in breathing, number of breaths per minute, depth of breathing, breathing rhythm, objective signs of difficulty in inhaling and exhaling. Diagnostic value of dynamic chest examination.

Inspection the patient's abdomen both vertically and horizontally position of the patient. Symmetry, involvement in breathing. The circumference of the abdomen. The shape of the umbilical ring. Type of hair loss. Assessment of gender traits.

Inspection of limbs. Inspection of palms, feet, fingers, nails. Examination of muscles, joints and bones. Symmetry of the extremities. Deformity of bones and joints. Muscular tone and level of muscle mass.

Results of a local examination of a healthy patient.

1.5. Palpation. Types and rules

Physical proof of the palpation method, guidelines, methodology and forms of palpation. Superficial palpation. Deep palpation.

Palpation of the head, neck. Technique of palpation method of the head and neck. Examination and palpation of the thyroid gland. Palpation of the lymph nodes of the head and neck.

Palpation of the chest. Determination of the shape of the chest (examination and palpation). Chest palpation technique. Assessment of the epigastric angle. Determination of chest elasticity. The study of vocal fremitus. Palpation of the breast. Palpation of chest pain points. Palpation of the apical thrust. Characteristics of the apical impulse: localization, width, resistance. Determination of the pulse on the radial and carotid arteries. Pulse characteristics: symmetry, volume, tension, rhythm, rate.

Results of palpation of the head, neck, chest of a healthy patient. Factors influencing the informative value of palpation.

Characteristics of the pulse of a healthy patient.

*Abdominal palpation***.** Technique of superficial palpation of the abdomen. Diagnostic value of superficial palpation of the abdomen.

Deep palpation of abdominal organs. Technique of deep palpation of abdominal organs. Palpation of the sigmoid colon. Palpation of the cecum. Palpation of the transverse colon. Determination of the position of the large curvature of the stomach. Characteristics of individual properties of the organs of abdominal cavity: localization, size, consistency, painfulness, mobility according to the results of palpation. Diagnostic value of deep palpation of abdominal organs.

Determination of free fluid in the abdominal cavity.

Technique of palpation of the liver and gallbladder, diagnostic value. Technique of palpation of the spleen, diagnostic value.

Results of superficial palpation of the abdomen and deep palpation of abdominal organs in a healthy patient. Factors influencing the informative value of palpation.

Palpation of lymph nodes. Technique of palpation of the lymph nodes of the head and neck. Technique of palpation of supra-, subclavian and axillary lymph nodes. Technique of palpation of inguinal and popliteal lymph nodes. Characteristics of individual properties of lymph nodes: localization, size, consistency, mobility, adhesion, painfulness.

Palpation of the kidneys, bladder. Technique of palpation of the kidneys in a vertical and horizontal position. Technique of palpation of ureteral points. Technique of palpation of the bladder.

Results of palpation of lymph nodes, kidneys, bladder in a healthy patient. Results of palpation of lymph nodes, kidneys, bladder in a healthy patient. Factors influencing the informative value of palpation.

1.6. Percussion. Types and rules

Rules, techniques and types of percussion. Types of percussion sounds.

Comparative and topographic percussion of the lungs. Technique of comparative percussion of the lungs. Technique of topographical percussion of the lungs. Definition of the border of the lower edge of the lungs. The concept of the mobility of the lower lung edge. Diagnostic significance of lung percussion.

Lung percussion results of a healthy patient. Factors influencing the informative value of percussion.

Percussion of the heart. Method of determining the boundaries of relative cardiac dullness. Determination of the boundaries of the vascular bundle. The concept of absolute heart dullness. Configuration of the heart. Diagnostic value of heart percussion.

Results of heart percussion in a healthy patient. Factors influencing the informative value of percussion.

Percussion of the liver and spleen. Liver percussion technique. Determination of the upper and lower limits of absolute liver dullness by topographic lines. Determination of the size of the liver by the method of M.G.Kurlov. Diagnostic value of liver percussion. The concept of percussion of the spleen. Examination of the spleen (percussion, palpation). Bladder percussion. Factors affecting the informativeness of percussion.

The results of percussion of the liver and spleen of a healthy patient.

1.7. Auscultation. Types and rules

Auscultation: general rules, techniques and types.

Lung auscultation. The method of auscultation of the lungs. The main breath sounds: mechanism of formation, characteristics, places of listening. The causes of breath sound changes.

Bronchophony technique.

The results of auscultation of the lungs of a healthy patient.

Heart auscultation. Technique of heart auscultation. Heart sounds, the mechanism of their formation. The main sounds (S1 and SII) and additional (SIII and SIV). Characteristics of sounds: volume, timbre, duration. Character of changes of the basic heart sounds in norm (amplification, reduction, splitting, bifurcation).

Results of auscultation of the heart of a healthy patient. Factors influencing the informative value of auscultation.

Vessel auscultation. Auscultation technique of carotid arteries, femoral arteries, renal arteries. Measurement of arterial pressure. Assessment of central and peripheral venous pressure.

Abdominal auscultation. Abdominal auscultation technique. Auscultation of the renal arteries. Results of auscultation of vessels and abdomen of a healthy patient. Factors influencing the informative value of auscultation.

1.8. Laboratory tests

General notion of laboratory methods of research, their importance in diseases of internal organs. The concept of basic and specific laboratory tests in diseases of internal organs.

Basic laboratory tests. Complete blood count. Reference values of the norm. Diagnostic value of deviations from the norm in diseases of internal organs.

Biochemical blood analysis. Reference values of the norm. Diagnostic value of deviations from the norm in diseases of internal organs.

Urinalysis. Reference values of the norm. Diagnostic value of deviations from the norm in diseases of internal organs.

1.9. Instrumental diagnostic methods

A general idea of instrumental diagnostic methods, their importance in diseases of internal organs. Mandatory and additional instrumental studies.

Radial diagnostic methods, diagnostic value in diseases of internal organs.

Endoscopic diagnostic methods, diagnostic value in diseases of internal organs.

Ultrasound diagnostic methods in diseases of internal organs.

1.10. Clinical basis of electrocardiography. Electrocardiogram recording. Normal electrocardiogram interpretation

Electrophysiological basics of electrocardiography. Device and types of electrocardiographs. Fundamentals of safety when working with an electrocardiograph. The method of recording an electrocardiogram (ECG) in 12 leads. Algorithm of interpretation of normal ECG. Recording rate, voltages, evaluation of rhythm, calculation of heart rate, determination of the electrical axis of the heart. Interpretation of a normal electrocardiogram.

Interviewing patients, conducting an objective examination of a healthy patient, interpretation of the results. Practice skills of physical examination of the patient.

2. General propaedeutics (semiotics)

2.1. Examination of patients with respiratory diseases

The main complaints of respiratory diseases and their mechanism: chest pain; cough; shortness of breath and/or attacks of suffocation; hemoptysis and/or pulmonary hemorrhage; fever; voice changes (hoarseness, aphonia).

Detailed description of the main complaints according to the algorithm: localization and irradiation, nature, duration, influencing factors (provoking, relieving). Diagnostic significance of the main complaints.

Features of collecting anamnesis of the disease (present history) and anamnesis of life (past history) in patients with respiratory diseases.

General inspection, inspection and palpation of the chest. General inspection in case of respiratory diseases. Forced position of the patient in case of respiratory diseases. Central cyanosis, mechanism of formation. «Nail clubbing» symptom

Local inspection in diseases of the respiratory organs. Determination of the shape of the chest (examination and palpation). Static chest inspection. Pathological forms of the chest. Symmetry of the chest. Spinal curvatures: kyphosis, lordosis, scoliosis, kyphoscoliosis. Diagnostic value of static chest inspection in case of respiratory diseases.

Dynamic inspection of the chest. Pathological changes in the circumference of the chest, chest excursions on inhalation and exhalation. Objective signs of difficulty in inhaling and exhaling (inspiratory, expiratory and mixed dyspnea). Pathological abnormalities: violation of the type of breathing (thoracic, abdominal, mixed), symmetry of respiratory movements, participation of auxiliary muscles in breathing, change in the number of breaths per minute, violation of the depth and rhythm of breathing. Pathological types of respiration (stridor, Cheyne-Stokes breathing, Kussmaul breathing, Biot’s breathing). Diagnostic value of dynamic chest examination.

Palpation of the chest in case of respiratory diseases. Palpation of chest pain points. Determination of local soreness and elasticity of the chest. Changes in the

elasticity of the chest. Study of vocal fremitus in symmetrical areas. Strengthening and weakening of vocal fremitus in respiratory diseases. Diagnostic value of chest palpation in case of respiratory diseases.

Percussion and auscultation of the lungs. Comparative percussion of the lungs. The nature of percussion sound in symmetrical areas of the chest is normal and pathological (clear pulmonary sound, dullness, complete dull (flatness), hyperresonant, tympanic). Diagnostic value of comparative lung percussion.

Topographic percussion of the lungs. Determination of the lower border of the lungs. Change of the lower border of the lungs in the pathology of the respiratory organs. Diagnostic value of topographic lung percussion.

Lung auscultation. The nature of the change in the main respiratory sounds in the pathology of the respiratory organs. Pathological respiratory sounds, mechanism of their formation. Dry rales. Wet rales. Crepitation. Pleural friction rub. Differential diagnosis of pathological respiratory sounds.

Bronchophony technique, diagnostic value.

Diagnostic value of lung auscultation.

Additional diagnostic methods. Laboratory tests in case of respiratory diseases: complete blood count, biochemical blood analysis, sputum test, pleural fluid test. Differential diagnosis of exudate and transudate.

Instrumental methods of investigation in respiratory diseases: pulse oximetry, radiography, chest computed tomography scan, spirometry. The concept of bronchoscopy, thoracoscopy. Diagnostic value of instrumental methods.

The main clinical syndromes in case of respiratory diseases. Syndrome of bronchial obstruction. Syndrome of emphysema. Pulmonary consolidation syndrome. Lung cavity syndrome. Atelectasis syndrome (obturation and compression). Syndrome of fluid accumulation in pleural cavity. Syndrome of accumulation of air in the pleural cavity (pneumothorax). Respiratory failure syndrome (acute and chronic).

2.2. Examination of patients with cardiovascular diseases

The main complaints of circulatory diseases and their mechanism: pain in the heart area; shortness of breath and/or choking attacks; palpitation; cough; hemoptysis; pain or heaviness in the right hypochondrium area; edema; headache, dizziness, vision changes.

Details of the main complaints according to the algorithm: localization and irradiation, nature, duration, what provokes it, what alleviates it. Features of collecting anamnesis of disease (present history) and anamnesis of life (history) in patients with cardiovascular diseases.

General inspection, inspection of the heart and peripheral vessels. General inspection of the patient with cardiovascular diseases. Forced position of the patient in cardiovascular diseases. Peripheral cyanosis and its difference from central cyanosis. Characteristics of edemas in circulatory diseases. Diagnostic value of the general inspection.

Examination of the heart area: cardiac and apical impulses, pathological pulsation, protrusion in the heart area. Examination of peripheral arteries and veins. The difference between venous and arterial pulsation in the neck, the causes of their occurrence. Hepatojugular reflux. Diagnostic value of examination of the heart area and peripheral vessels.

Palpation of the cardiac and apical impulse. Characteristics of the apical impulse: localization, width, resistance. The concept of systolic and diastolic tremor in the heart area. Palpation of epigastric pulsation, its causes. Diagnostic value of apical impulse palpation.

Palpation of vessels. Determination of the pulse on the radial, carotid arteries and dorsalis pedis artery. Changes in arterial pulse in diseases of the circulatory system.

Percussion and auscultation of the heart. Defining the boundaries of relative heart dullness Changing the boundaries of relative heart dullness in cardiovascular diseases. Results of physical examination in patients with atrial and ventricular hypertrophy.

Heart auscultation. Changes in heart sounds in case of cardiovascular diseases: weakening, amplification, splitting, the appearance of additional sounds. «Quail» rhythm. Rhythm of the «gallop». Pendulum-like rhythm. Embryocardia, tachycardia, bradycardia, arrhythmia. «Pistol-shot» sound according Strazhesko. Diagnostic value of changes in heart sounds.

Cardiac murmurs, the mechanism of formation, classification. Difference between organic and functional murmurs. Relationship of murmurs and cardiac activity. Systolic and diastolic murmurs. Places of the best listening to murmurs, mechanisms of heart murmur radiation. Pericardial friction rub. Diagnostic value of cardiac murmurs.

Additional diagnostic methods. Laboratory tests: complete blood count, urinalysis; biochemical blood analysis. Specific cardiovascular indicators. Interpretation of changes in the activity of myoglobin, troponin T and I, total creatine kinase, MB- creatine kinase, parameters of lipid metabolism, brain natriuretic peptide. Diagnostic value of laboratory tests in case of cardiovascular diseases.

Instrumental methods of investigation in cardiovascular diseases: electrocardiography (ECG) and stress-ECG tests, chest X-ray, echocardiography, angiography. Diagnostic value of instrumental methods of investigation in cardiovascular diseases.

The main clinical syndromes in cardiovascular disease. Arterial hypertension syndrome. Syndrome of peripheral circulatory disorders (arterial insufficiency, venous insufficiency, lymphedema). Acute coronary insufficiency syndrome. Acute left ventricular failure syndrome. Chronic heart failure syndrome. Cardiac arrhythmia syndrome. Acute vascular insufficiency syndrome.

Interpretation of the chest X-ray. Interpretation of an electrocardiogram in cardiovascular disease. Interpretation of biochemical blood analysis in cardiovascular disease.

2.3. Clinical and electrocardiographic signs of heart arrhythmias, conduction disorders, atrial and ventricular hypertrophy

Ectopic complexes (supraventricular, atrioventricular, ventricular extrasystole). Electrocardiographic and clinical manifestations of extrasystole.

Electrocardiographic and clinical signs of atrial and ventricular hypertrophy.

Ectopic rhythms (paroxysmal supraventricular and ventricular tachycardia). Atrial fibrillation and atrial flutter. Ventricular fibrillation. Electrocardiographic and clinical manifestations of cardiac arrhythmias.

Arrhythmias associated with impaired sinus node automatism (sinus tachycardia, sinus bradycardia, sinus arrhythmia). Heart conduction disorders. Concept of sinoatrial

block, atrial conduction disorders. Atrioventricular block: grade I, II and III. Complete left bundle branch block. Complete and incomplete right bundle branch block.

Clinical manifestations of cardiac conduction disorders. Adams-Stokes attack.

Interpretation of an electrocardiogram for cardiac arrhythmias and conduction disorders. Practical skills training in examination of patients with respiratory and cardiovascular diseases.

2.4. Examination of patients with gastrointestinal diseases

The main complaints of patients with diseases of the esophagus, stomach, intestines, liver, gallbladder, pancreas. Abdominal pain, the mechanism of formation, characteristics in various diseases. Diagnostic value of abdominal pain.

Jaundice: color changes in the skin and mucous membranes, urine, feces. Skin itching.

Concept of dyspepsia. Appetite disorders. Dysphagia. Mechanisms of occurrence, characteristics. Diagnostic value.

Disorders of the defecation. Characteristics of stool changes (Bristol stool scale). Diagnostic significance. Diarrhea, constipation: mechanisms of occurrence, characterization. Diagnostic significance of defecation disorders.

Concept of nutritional deficiency.

Features of collecting medical and life history in patients with diseases of the digestive organs.

General and local inspection. Examination of a patient with gastrointestinal diseases. Skin changes: spider veins, hemorrhagic rashes, erythema palmaris, traces of scratching, hyperpigmentation, gynecomastia, edema. Jaundice, its types. Changes in the oral cavity, characteristic of diseases of the digestive organs.

Examination of the abdomen in the vertical and horizontal position of the patient. Configuration of the abdomen, participation of abdominal wall in the act of breathing. Ascites. Development of venous collaterals on the anterior abdominal wall («Caput Medusa»). Hernia of the anterior abdominal wall, visible peristalsis of the stomach and intestines.

Auscultation, percussion, palpation of the abdomen. Abdominal auscultation. Assessment of peristaltic sounds. Determination of the lower border of the large curvature of the stomach by stethoacoustic palpation.

Percussion of the abdomen, character of the percussion sound in flatulence, obesity and ascites. Mendel's symptom. Method of determining free fluid in the abdominal cavity. Percussive changes in the size of the liver (by the method of M.G.Kurlov). Diagnostic value of percussion of the abdomen.

Superficial palpation of the abdomen. Clinical significance of superficial and deep palpation of the abdomen in diseases of the digestive system. Concept of skin hyperesthesia zones (Zakharyin-Ged zones). Tension of anterior abdominal wall muscles, peritoneal irritation symptom (rebound tenderness or Shchetkin–Blumberg's sign). Palpation of the sigmoid colon, caecum, transverse colon in diseases of the digestive system.

Determination of the size of the liver according to M.G.Kurlov, changes in the size of the liver depending on the pathological process. Palpation of the liver. Changes

in the lower edge of the liver, characteristic of various diseases. Diagnostic value of liver palpation.

Symptoms that can be detected in pathological processes in gallbladder: Ortner's, Murphy's, Mussy's (frenicus) symptoms. Diagnostic value of palpation of gallbladder.

Changes in percussion and palpatory dimensions of the spleen in diseases of the digestive organs.

Additional diagnostic methods. Laboratory tests for diseases of the esophagus, stomach and intestines.

Laboratory methods of investigation in diseases of the esophagus, stomach and intestines.

The concept of pH-metric. Urease breath test. Coprogram. Test of physical and chemical properties of feces. Microscopic examination of feces. Bacteriological examination of feces. Fecal occult blood test.

Complete blood count, diagnostic value in diseases of the esophagus, stomach and intestines.

Biochemical blood tests: changes in the level of bilirubin, transaminases, alkaline phosphotase, alpha-1-antitrypsin, ceruloplasmin. Cytolytic syndrome in liver diseases. Hypoproteinemia. Dyslipidemia.

Diagnostic value of biochemical blood analysis in diseases of the digestive system. Coagulation test. Secondary coagulopathy.

Serological markers of hepatitis B and C viruses, diagnostic significance.

Instrumental methods of investigation in digestive diseases: ultrasonic; endoscopic; radiological. Manometry of the esophagus and stomach. Liver scintigraphy. Liver puncture biopsy.

Clinical and laboratory syndromes in gastrointestinal diseases. Dyspeptic syndrome. Maldigestion and malabsorption syndrome. Syndrome of esophageal, gastric and intestinal bleeding. Jaundice syndrome. Cholestasis syndrome. Hypersplenism syndrome. Portal hypertension syndrome. Liver failure syndrome. Portosystemic encephalopathy syndrome.

Interpretation of general and biochemical blood analysis in diseases of the digestive system

2.5. Examination of patients with kidney and urinary tract diseases

Main complaints of patients with kidney and urinary tract diseases. Pain in the lumbar region: mechanism of occurrence, characteristics in various diseases.

Dysuria. Change in the volume of urine. Edema, the mechanism of formation. Difference of renal edema from edema of other etiology.

Peculiarities of medical and life history in patients with kidney and urinary tract diseases.

General inspection of a patient with kidney and urinary tract diseases. Changes in skin color. Peculiarities of edema. Swelling, bulging, asymmetry in the lumbar region. Presence of scratching. Visual assessment of urine.

Palpation of the kidneys in a vertical and horizontal position. Clinical significance of palpation of the kidneys, characteristics of the kidneys on palpation. Palpation of ureteral points Assessment of painfulness in the projection points of the urinary tract. Determination of the tapping symptom in the projection of the kidneys.

Auscultation of the renal arteries Clinical significance of murmur in the projection of renal arteries. Percussive determination of the upper border of the bladder.

Additional diagnostic methods. Laboratory methods of investigation in diseases of the kidneys and urinary tract. Urinalysis: changes in the physical, chemical and microscopic properties of urine. Urine tests by Nechiporenko and Zimnitsky. Urine test for microalbuminuria. Biochemical blood analysis: urea, creatinine, total protein, albumin, cholesterol. Calculation of glomerular filtration rate (GFR). Diagnostic value of laboratory investigation methods in in kidney and urinary tract diseases.

Instrumental methods of investigation in kidney and urinary tract diseases. Diagnostic value of X-ray, ultrasound examination of the kidneys; cystoscopy, radioisotope renography, renal biopsy in diseases of the kidneys and urinary tract.

The main clinical syndromes in diseases of the kidneys and urinary tract: urinary syndrome; nephrotic syndrome; nephritic syndrome, renal failure syndrome (acute and chronic).

Interpretation of the results of laboratory tests for diseases of the kidneys and urinary tract: complete blood count, urinalysis, Nechiporenko and Zimnitsky tests.

2.6. Examination of patients with hematologic diseases

The main complaints of patients with hematologic diseases. Non-specific manifestations of diseases of the blood system. Pain in the throat, bones, right and left subcostal area. Bleeding (bleeding from the nose, gums, gastrointestinal tract, uterus). Skin itching. Fever.

General inspection of a patient with hematologic diseases. Change in color of skin and mucous membranes. Inspection and palpation of the lymph nodes of the head and neck, supra-, subclavian and axillary lymph nodes, inguinal and popliteal lymph nodes. Increased regional lymph nodes. Bleeding, petechiae.

Percussion. Pain on percussion along the bones. Increased size of the liver and spleen. Palpation of the liver and spleen. Changes in superficially located lymph nodes, liver and spleen; diagnostic significance of organ changes in diseases of the blood system.

Additional diagnostic methods. Laboratory and instrumental investigation methods in diseases of the blood system. Complete blood count. Diagnostic value of the identified changes. Coagulation test. The concept of bone marrow puncture, lymph node, immunophenotyping.

Main clinical syndromes in diseases of the blood system. Anemic syndrome. Hemorrhagic syndrome. Infectious syndrome. Hyperplastic syndrome.

2.7. Examination of patients with diseases of the thyroid gland, pancreas (diabetes mellitus). Examination of patients with musculoskeletal system diseases

Examination methods of patients with thyroid diseases. Main complaints of patients with thyroid diseases.

Appetite disorders, weight changes, emotional disturbances, disorders of the digestive system, cardiovascular system.

Inspection of the skin and subcutaneous adipose tissue of a patient with thyroid diseases. Changes in skin coloring, features of mucous membranes. Eye symptoms in diseases of the thyroid gland. Edema. Obesity, lack of body weight.

Inspection and palpation of the thyroid gland. The clinical significance of

changes in the size and consistency of the thyroid gland. Degrees of enlargement of the thyroid gland. Auscultation of the thyroid gland.

Additional diagnostic methods. Laboratory methods of investigation in diseases of the thyroid gland: laboratory criteria of hypothyroidism, hyperthyroidism. Diagnostic value of laboratory methods of investigation.

Instrumental methods of investigation in thyroid diseases: ultrasound examination of the thyroid gland, fine needle puncture biopsy of the thyroid gland, computer tomography of the neck area. Diagnostic value of instrumental methods of investigation.

Examination methods of patients with diabetes mellitus. Main complaints of patients with diabetes mellitus. Polydypsia, polyuria, muscle weakness, polyphagia, pruritis.

Inspection of the skin and subcutaneous tissue of a patient with diabetes mellitus. Changes in skin color, rubeosis, peculiarities of mucous membranes. Obesity, body weight deficit.

Additional diagnostic methods. Laboratory methods of investigation in diabetes mellitus. Assessment of blood glucose level. Determination of glycated hemoglobin. Diagnostic criteria of diabetes mellitus.

Instrumental methods of investigation in diabetes mellitus: ultrasound examination of the pancreas, computer tomography of the abdominal cavity organs.

The main clinical syndromes in diseases of the thyroid, pancreas: thyrotoxicosis syndrome; hypothyroidism syndrome; hypoglycemia syndrome; hyperglycemia syndrome.

Interpretation of biochemical blood analysis in diseases of the endocrine system

Methods of examination of patients with diseases of the musculoskeletal system. Complaints of patients with diseases of the musculoskeletal system. Pain in the bones and joints: the mechanism of formation, type. Morning stiffness, fever, limitation of joint mobility.

Inspection of patients with musculoskeletal diseases. Gait, posture, forced position of the patient. Change in skin color. Configuration of joints, assessment of the volume of active and passive movements in the joints. Palpation of joints.

Additional diagnostic methods. Diagnostic value of laboratory methods of investigation in diseases of the musculoskeletal system.

Instrumental methods of investigation in musculoskeletal diseases: X-ray, computed tomography, magnetic nuclear tomography, ultrasound, arthroscopy. Diagnostic value of instrumental methods.

Clinical review of patients with diseases of the digestive organs, kidneys and urinary system, blood system, endocrine system, musculoskeletal system.

Examination of patients with diseases of the digestive system, kidneys and urinary system, blood system, endocrine system, musculoskeletal system, analysis of clinical cases.

Objective examination of patients with diseases of internal organs. Interpretation of the results of laboratory and instrumental tests. Control of practical skills in the examination of patients with diseases of internal organs.

3. Special propaedeutics (special pathology)

3.1. Bronchial asthma. Chronic obstructive pulmonary disease

Bronchial asthma: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, complications. Interpretation of the results of laboratory and instrumental tests (complete blood count, biochemical blood analysis, sputum test, allergic tests, spirometry, picfluometry, pulse oximetry). Principles of treatment and prevention.

Chronic obstructive pulmonary disease: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, complications. Interpretation of the results of laboratory tests (sputum test, complete blood count) and instrumental investigations (spirometry, pulse oximetry, X-ray, bronchoscopy). Principles of treatment and prevention.

Medical care for an attack of bronchial asthma.

Examination of patients with bronchial asthma, chronic obstructive pulmonary disease, analysis of clinical cases.

3.2. Pneumonia. Pleurisy

Pneumonia: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, complications Interpretation of the results of laboratory and instrumental tests (complete blood count, biochemical blood analysis, sputum test, spirometry, pulse oximetry, X-ray, computed tomography, bronchoscopy, ultrasound, thoracentesis, thoracoscopy). Principles of treatment and prevention. Principles of treatment and prevention. The concept of suppurative lung diseases.

Pleurisy: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, complications. Interpretation of the results of laboratory and instrumental investigations (complete blood count, biochemical blood analysis, pleural fluid test, pulse oximetry, X-ray, computed tomography, bronchoscopy, ultrasound, thoracocentesis, thoracoscopy). Principles of treatment and prevention.

Criteria for respiratory failure.

Examination of patients with pneumonia, pleurisy, analysis of clinical cases.

3.3. Acute rheumatic fever. Infective endocarditis

Acute rheumatic fever: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, complications, principles of treatment and prevention. Interpretation of the results of laboratory and instrumental tests (complete blood count, biochemical blood analysis, echocardiography).

Infective endocarditis: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, complications, principles of treatment and prevention. Interpretation of the results of laboratory and instrumental tests (complete blood count, biochemical blood analysis, echocardiography).

Examination of patients with acute rheumatic fever, infectious endocarditis, analysis of clinical cases.

3.4. Heart valve diseases

Acquired mitral valve defects (mitral insufficiency, mitral stenosis): etiology, pathogenesis and intracardiac hemodynamics, clinical picture, instrumental diagnosis, principles of treatment and prevention.

Acquired aortic valve defects (aortic insufficiency, aortic stenosis): etiology, pathogenesis and intracardiac hemodynamics, clinical picture, instrumental diagnosis, principles of treatment and prevention.

Auscultation of the heart in patients with acquired mitral and aortic heart defects.

Interpretation of the results of laboratory and instrumental tests (complete blood count, biochemical blood analysis, electrocardiogram, echocardiography, radiography).

The value of echocardiography for the diagnosis of heart valve diseases.

Examination of patients with heart valve diseases, analysis of clinical cases.

3.5. Arterial hypertension. Atherosclerosis

Primary arterial hypertension: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, complications, principles of treatment and prevention.

Diagnosis of target organ damage; identification of risk factors to determine the risk level of the disease. Interpretation of the results of laboratory and instrumental tests (complete blood count, biochemical blood analysis, electrocardiogram, echocardiography, radiography, ultrasound, hormonal status).

Secondary arterial hypertension: definition, classification.

Hypertensive crisis: definition, classification, clinical picture. Complications of hypertensive crisis. Medical care for hypertensive crisis.

Atherosclerosis: definition, classification, risk factors. Clinical manifestations of atherosclerosis of the aorta, coronary arteries, cerebral arteries, arteries of the lower extremities, kidneys, mesenteric arteries. Indicators of lipid metabolism in the norm and target values. Principles of treatment and prevention of atherosclerosis. Interpretation of the results of laboratory and instrumental tests (complete blood count, biochemical blood analysis, lipidogram, electrocardiogram, echocardiography, 24-hour ambulatory blood pressure monitoring, radiography, ultrasound of blood vessels).

Examination of patients with arterial hypertension, atherosclerosis, analysis of clinical cases.

3.6. Ischemic heart disease. Angina pectoris. Myocardial infarction

Ischemic (coronary) heart disease: definition, etiology and pathogenesis, classification (WHO).

Angina pectoris: definition, etiology and pathogenesis, classification. Stable angina pectoris, functional classes. Unstable angina pectoris. Clinical and laboratory-instrumental diagnosis, principles of treatment and prevention of angina. Pain syndrome management in angina pectoris.

Myocardial infarction: definition, etiology and pathogenesis, classification. Clinical and laboratory-instrumental diagnostics, principles of treatment and prevention of myocardial infarction. Complications of myocardial infarction.

Interpretation of the results of laboratory and instrumental investigations (complete blood count, biochemical blood analysis, myocardial necrosis markers, electrocardiogram, stress tests, echocardiography, 24-hour ECG monitoring, X-ray).

Examination of patients with coronary heart disease, analysis of clinical cases.

3.7. Acute and chronic heart failure. Cardiac arrhythmias and conduction disorders

Acute heart failure, definition, concept of etiology and pathogenesis, classification. Clinical picture, principles of treatment and prevention of acute heart failure.

Chronic heart failure: definition, concept of etiology and pathogenesis, classification (stages and functional classes). Clinical picture, principles of treatment and prevention of chronic heart failure.

Interpretation of the results of laboratory and instrumental tests (complete blood count, biochemical blood analysis, atrial natriuretic peptide, electrocardiogram, echocardiography, X-ray, ultrasound).

Cardiac arrhythmias (atrial and ventricular extrasystole, paroxysmal tachycardia, atrial fibrillation and flutter, ventricular fibrillation). Conduction disorders (right and left bundle branch block, atrioventricular block). Clinical picture, ECG diagnostics, principles of treatment.

Interpretation of the results of instrumental investigations (electrocardiogram, echocardiogram, 24-hour ECG monitoring).

Examination of patients with cardiac arrhythmias and conduction disorders, analysis of clinical cases

3.8. Diseases of the digestive system: gastritis, stomach ulcer and duodenal ulcer. Management of gastrointestinal bleeding

Acute and chronic gastritis: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, principles of treatment and prevention. Functional intestinal dyspepsia.

Acute and chronic gastroduodenal ulcer: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, complications, principles of treatment and prevention.

Interpretation of the results of laboratory and instrumental investigations (complete blood count, biochemical blood analysis, fecal occult blood test, gastroduodenoscopy, colonoscopy, morphological study of the biopsy material, radiography, ultrasound examination).

Management of gastrointestinal bleeding.

Examination of patients with diseases of the stomach and intestine, analysis of clinical cases.

3.9. Liver diseases: hepatitis, liver cirrhosis. The concept of the gallbladder and pancreas diseases

Acute and chronic hepatitis: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, principles of treatment and prevention.

Liver cirrhosis: definition, etiology, pathogenesis, clinical manifestations, classification, principles of treatment and prevention.

Interpretation of the results of laboratory and instrumental investigations (complete blood count, biochemical blood analysis, gastroduodenoscopy, elastography, liver biopsy, ultrasound examination).

The concept of diseases of gallbladder and pancreas.

Examination of patients with diseases of the liver, gallbladder, pancreas, analysis of clinical cases

3.10. Kidney diseases: glomerulonephritis, pyelonephritis, acute kidney injury, chronic kidney disease

Acute and chronic glomerulonephritis: definition, etiology, pathogenesis, clinical manifestations, classification, complications, principles of treatment and prevention.

Acute and chronic pyelonephritis: definition, etiology, pathogenesis, clinical manifestations, classification, complications, principles of treatment and prevention.

Acute renal injury: definition, etiology, pathogenesis, clinical manifestations, classification. Chronic kidney disease: definition, etiology, pathogenesis, clinical manifestations, classification.

The concept of urinary tract infection.

Interpretation of the results of laboratory and instrumental investigations (complete blood count, biochemical blood analysis, urinalysis, ultrasound, kidney biopsy, renal scintigraphy).

Examination of patients with kidney diseases, analysis of clinical cases.

3.11. Hematologic diseases: anemia, hemoblastosis

Anemia: definition, etiology, pathogenesis, clinical manifestations, classification, complications, principles of treatment and prevention.

Iron deficiency anemia: etiology, clinical and laboratory diagnosis, principles of treatment and prevention.

B-12 deficiency anemia: etiology, clinical and laboratory diagnosis, principles of treatment and prevention.

Hemoblastosis: definition, etiology, pathogenesis, clinical manifestations, classification, complications, principles of treatment and prevention.

Interpretation of the results of laboratory and instrumental investigations (complete blood count, biochemical blood analysis, coagulogram) The significance of morphological and cytochemical studies of bone marrow and lymph nodes.

Examination of patients with anemia and hemoblastosis, analysis of clinical cases.

3.12. Thyroid diseases, diabetes mellitus. Management of hyperglycemic and hypoglycemic comas

Thyroid diseases: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, principles of treatment and prevention. Hypothyroidism. Hyperthyroidism.

Diabetes mellitus: definition, etiology, pathogenesis, risk factors, clinical manifestations, classification, principles of treatment and prevention. Hypoglycemic and hyperglycemic comas. Glucose intolerance. Management of hyperglycemic and hypoglycemic comas.

Interpretation of the results of laboratory and instrumental investigations (complete blood count, biochemical blood analysis, assessment of hormonal status, glycemia level, glucose tolerance test, glycated hemoglobin, urinalysis, ultrasound examination).

Examination of patients with thyroid diseases, diabetes mellitus, analysis of clinical cases.

3.13. Diseases of the musculoskeletal system: arthritis in case of connective tissue diseases (rheumatoid arthritis), infectious arthritis, osteoarthritis, gouty arthritis

Rheumatoid arthritis: definition, etiology, pathogenesis, clinical manifestations, classification, complications, principles of treatment and prevention.

Infectious arthritis: definition, etiology, pathogenesis, clinical manifestations, classification, complications, principles of treatment and prevention.

Osteoarthritis: definition, etiology, pathogenesis, clinical manifestations, classification, complications, principles of treatment and prevention.

Gouty arthritis: definition, etiology, pathogenesis, clinical manifestations, classification, complications, principles of treatment and prevention.

Interpretation of the results of laboratory and instrumental investigations (complete blood count, biochemical blood analysis, markers of autoimmune diseases, synovial fluid examination, radiography, computed tomography, ultrasound examination).

Examination of patients with diseases of the musculoskeletal system, analysis of clinical cases.

3.14 Acute allergic diseases. Management of anaphylactic shock

Acute urticaria, Quincke's edema, anaphylactic shock: definition, etiology, pathogenesis, clinical manifestations, classification, complications, principles of treatment and prevention. Management of anaphylactic shock.

Interpretation of the results of laboratory and instrumental investigations (complete blood count, biochemical blood analysis, allergic tests).

Examination of patients with acute urticaria, Quincke's edema, anaphylactic shock, analysis of clinical cases.

Examination of patients with diseases of internal organs, proceeding in a typical form.

Justification of the clinical diagnosis and design of the of the final educational case history.

ACADEMIC DISCIPLINE CURRICULAR CHART

Section, topic #	Section (topic) name	Number of classroom hours		supervised student independent work	Literature	Practical skill	Form of control	
		lectures	practical				of practical skill	of current/ interim certification
4 semester								
	Lectures	**9**	**-**	**3**				
1.	Introduction to the discipline «Propaedeutics of internal diseases». Algorithm of clinical examination of patients with diseases of internal organs	1,5	-	-	1, 15			
2.	Communications in medicine. The subjective method of examination of the patient	1,5	-	-	1, 15			
3.	General and local inspection	1,5	-	-	1, 15			
4.	Palpation in patient's examination	1,5	-	-	1, 15			
5.	Percussion in patient's examination	1,5	-	-	1, 15			
6.	Auscultation in patient's examination	1,5	-	-	1, 15			
7.	Laboratory and Instrumental diagnostic methods	-	-	1,5	1, 15			Interview; protection of the abstract
8.	Clinical basis of electrocardiography. Electrocardiogram recording. Normal electrocardiogram interpretation	-	-	1,5	1, 15			Interview; tests; electronic tests
	Practical classes	**-**	**36**	**-**				
1.1	Introduction to the academic discipline «Propaedeutics of Internal Diseases». A brief history of the internal medicine. Medical ethics and deontology. Basic concepts of clinical medicine	-	2	-	1, 2, 3, 5, 8, 15			Interview; tests

1.2	Clinical algorithm of patient's examination	-	2	-	1, 2, 3, 5, 8, 15			Interview; tests; solving situational problems
1.3	Communications in medicine. Subjective method of patient's examination	-	2	-	1, 2, 3, 5, 8, 15			Interview; tests; solving situational problems
1.4	Objective methods of patient's examination. General inspection	-	2	-	1, 2, 3, 5, 8, 12, 15	Inspection of the skin and subcutaneous tissues	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests
1.5	Objective methods of patient's examination. Local inspection	-	2	-	1, 2, 3, 5, 8, 12, 15	Inspection and palpation of the thyroid gland	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests
1.6	Palpation: types and rules. Palpation of the head, neck, chest. Pulse examination	-	2	-	1, 2, 3, 5, 8, 9, 12, 15	1. Chest shape estimation (inspection and palpation). 2. Palpation of chest pain points. 3.Palpation of the apical impulse. 4. Assessment the pulse on the radial, carotid arteries and dorsalis pedis artery	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests
1.7	Superficial palpation of the abdomen. Deep palpation of abdominal organs	-	2	-	1, 2, 3, 5, 8, 9, 12, 15	1. Superficial palpation of the abdomen. 2. Palpation of the sigmoid colon. 3. Palpation of the cecum. 4. Palpation of the transverse colon 5. Palpation of the liver	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests; evaluation using electronic-mechanical simulators and robot simulators
1.8	Palpation of lymph nodes. Palpation of the kidneys, bladder	-	2	-	1, 2, 3, 5, 8, 12, 15	1. Inspection and palpation of the lymph nodes of the head and neck.	Performing a practical skill on simulative equipment or with the	Interview; tests

						2.Inspection and palpation of supra -, subclavian and axillary lymph nodes. 3.Inspection and palpation of inguinal and popliteal lymph nodes. 4. Palpation of kidneys in the vertical position. 5. Palpation of the kidneys in the horizontal position	help of a stimulated participant	
1.9	Percussion: types and rules. Comparative and topographic percussion of the lungs	-	2	-	1, 2, 3, 4, 5, 8, 9, 12, 15	1. Comparative percussion of the lungs. 2. Assessment the inferior lung border	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests; evaluation using electronic-mechanical simulators and robot simulators
1.10	Percussion of the heart	-	2	-	1, 2, 3, 4, 5, 8, 12, 15	Assessment of the relative heart dullness borders	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests;
1.11	Percussion of the liver and spleen	-	2	-	1, 2, 3, 4, 5, 8, 9, 12, 15	1. Assessment of the liver size according to M.G.Kurlov's method. 2. Palpation of the spleen	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests
1.12	Auscultation. Lung auscultation technique. Breath sounds of a healthy person	-	2	-	1, 2, 3, 4, 5, 8, 12, 15	Auscultation of the lungs	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests; protection of the abstract; evaluation using electronic-mechanical simulators and robot simulators
1.13	The technique of heart auscultation. Heart sounds of a healthy person	-	2	-	1, 2, 3, 4, 5, 8, 12, 15	Auscultation of the heart	Performing a practical skill on simulative equipment or with the	Interview; tests; protection of the abstract,

							help of a stimulated participant	evaluation using electronic-mechanical simulators and robot simulators
1.14	Auscultation of vessels. Abdomen auscultation	-	2	-	1, 2, 3, 4, 5, 8, 12, 15	Palpation of the ureteral points, assessment of the kidney tenderness, auscultation of the renal arteries	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests
1.15	Laboratory tests	-	2	-	1, 2, 3, 4, 5, 8, 13, 15	Complete blood count interpretation	Solving situational problems	Interview; tests; protection of the abstract
1.16	Instrumental diagnostic methods	-	2	-	1, 2, 3, 4, 5, 8, 13, 15			Interview; tests; protection of the abstract; solving situational problems
1.17	Clinical basis of electrocardiography. Electrocardiogram recording. Normal electrocardiogram interpretation	-	2	-	1, 2, 3, 5, 8, 13, 15	ECG interpretation	Solving situational problems	Interview; tests; protection of the abstract
1.18	Final class on the section «Patient's examination methods»	-	2	-	1, 2, 3, 4, 5, 8, 9, 11, 12,13, 15	1. Inspection of the skin and subcutaneous tissues. 2. Inspection and palpation of the lymph nodes of the head and neck. 3. Inspection and palpation of supra -, subclavian and axillary lymph nodes. 4. Inspection and palpation of inguinal and popliteal lymph nodes. 5. Inspection and palpation of the thyroid gland. 6. Chest shape estimation (inspection and palpation. 7. Palpation of chest pain points.	Performing a practical skill on simulative equipment or with the help of a stimulated participant *	Interview; electronic tests.* Credit

						8. Comparative percussion of the lungs. 9. Assessment the inferior lung border. 10. Auscultation of the lungs. 11. Assessment the pulse on the radial, carotid arteries and dorsalis pedis artery. 12. Palpation of the apical impulse. 13. Assessment of the relative heart dullness borders. 14. Auscultation of the heart. 15. Superficial palpation of the abdomen. 16. Palpation of the sigmoid colon. 17. Palpation of the cecum. 18. Palpation of the transverse colon. 19. Assessment of the liver size according to M.G. Kurlov's method. 20. Palpation of the liver. 21. Palpation of the kidneys in the horizontal position. 22. Palpation of kidneys in the vertical position. 23. Palpation of the ureteral points, assessment of the kidney tenderness, auscultation of the renal arteries. 24. Palpation of the spleen		

	5 semester							
	Lectures	**9**	**-**	**3**				
1	Patient's examination in case of respiratory diseases	1,5	-	-	1, 15			
2	The main clinical syndromes in case of respiratory diseases	-	-	1,5	1, 15			Tests; interview
3	Patient's examination and main clinical syndromes in case of cardiovascular diseases	1,5	-	-	1, 15			
4	Clinical and electrocardiographic signs of heart arrhythmias and heart conduction disorders	-	-	1,5	1, 15			Tests; interview
5	Patient's examination and main clinical syndromes in case of gastrointestinal diseases	1,5	-	-	1, 15			
6	Patient's examination and main clinical syndromes in case of kidney and urinary tract diseases	1,5	-	-	1, 15			
7	Examination of patients with hematologic diseases	1,5	-	-	1, 15			
8	Examination of patients with diseases of the thyroid gland, pancreas (diabetes mellitus). Examination of patients with musculoskeletal system diseases	1,5	-	-	1, 15			
	Practical classes	**-**	**54**	**-**				
2.1	Examination of patients with respiratory diseases. Subjective method of examination: interview. Objective examination method: general inspection, inspection and palpation of the chest	-	3	-	1, 2, 3, 4, 5, 8, 12, 15	1. Chest shape estimation (inspection and palpation). 2. Palpation of chest pain points	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests
2.2	Objective methods of patient's examination in case of respiratory diseases: lung percussion and lung auscultation. Respiratory tests and investigations	-	3	-	1, 2, 3, 4, 5, 8, 12, 15	1.Comparative percussion of the lungs. 2. Assessment the inferior lung border. 3. Auscultation of the lungs	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests; evaluation using electronic-mechanical simulators and robot simulators

2.3	The main clinical syndromes in case of respiratory diseases	-	3	-	1, 2, 3, 4, 5, 8, 12, 15	1. X-ray of the chest in frontal (lateral) projection interpretation. 2. Sputum test interpretation. 3. Pleural fluid test interpretation	Solving situational problems	Interview; tests; control papers; solving situational problems
2.4	Examination of patients with cardiovascular diseases. Subjective method: interview. Objective method: general inspection, inspection of the heart area and peripheral vessels, palpation of the heart area, pulse examination	-	3	-	1, 2, 3, 4, 5, 8, 12, 15	Assessment the pulse on the radial, carotid arteries and dorsalis pedis artery	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests
2.5	Objective examination methods of patients with cardiovascular diseases: heart percussion and heart auscultation. Additional diagnostic methods in case of cardiovascular diseases	-	3	-	1, 2, 3, 4, 5, 8, 12, 13, 15	1. Assessment of the relative heart dullness borders. 2. Auscultation of the heart	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests; evaluation using electronic-mechanical simulators and robot simulators
2.6	The main clinical syndromes in cardiovascular diseases	-	3	-	1, 2, 3, 4, 5, 8, 12, 13, 14, 15	1. X-ray of the chest in frontal (lateral) projection interpretation. 2. ECG interpretation. 3. Biochemical blood analysis interpretation	Solving situational problems	Interview; tests; solving situational problems
2.7	Clinical and electrocardiographic signs of heart arrhythmias	-	3	-	1, 2, 3, 4, 5, 8, 13, 14	ECG interpretation	Solving situational problems	Interview; tests; control papers
2.8	Clinical and electrocardiographic signs of heart conduction disorders, atrial and ventricular hypertrophy	-	3	-	1, 2, 3, 4, 5, 8, 13, 14	ECG interpretation	Solving situational problems	Interview; tests; solving situational problems
2.9	Final class on the topics: «Examination of patients with respiratory diseases» and «Examination of patients with cardiovascular diseases»	-	3	-	1, 2, 3, 4, 5, 8, 12, 13, 14, 15			Colloquium *; electronic tests; control papers; evaluation using electronic-mechanical

								simulators and robot simulators
2.10	Examination of patients with gastrointestinal diseases. Subjective method: interview. Objective method: general and local inspection	-	3	-	1, 2, 3, 4, 5, 8, 9, 12, 13, 15	1. Superficial palpation of the abdomen*. 2. Palpation of the sigmoid colon. 3. Palpation of the cecum	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests; evaluation using electronic-mechanical simulators and robot simulators
2.11	Objective examination of patients with gastrointestinal diseases. Auscultation, percussion, palpation of the abdomen	-	3	-	1, 2, 3, 4, 5, 8, 9, 12, 13, 15	1.Palpation of the transverse colon. 2. Assessment of the liver size according to M.G.Kurlov's method. 3. Palpation of the liver	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests; evaluation using electronic-mechanical simulators and robot simulators
2.12	Additional diagnostic methods, the main clinical syndromes in gastrointestinal diseases	-	3	-	1, 2, 3, 4, 5, 8, 9, 12, 13, 15	1. Complete blood count interpretation. 2. Biochemical blood analysis interpretation	Solving situational problems	Interview; tests; control papers; solving situational problems
2.13	Examination of patients with kidney and urinary tract diseases	-	3	-	1, 2, 3, 4, 5, 8, 11, 12, 13, 15	1. Palpation of kidneys in the vertical position. 2.Palpation of the kidneys in the horizontal position. 3. Palpation of the ureteral points, assessment of the kidney tenderness, auscultation of the renal arteries	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests
2.14	Additional diagnostic methods, the main clinical syndromes in case of kidney and urinary tract diseases	-	3	-	1, 2, 3, 4, 5, 8, 11, 12, 13, 15	1. Complete blood count interpretation. 2. Urinalysis interpretation. 3. Nechiporenko's urine test interpretation. 4 Zimnitsky's urine test interpretation	Solving situational problems	Interview; tests
2.15	Final class on the topics «Examination of patients with gastrointestinal diseases» and «Examination of patients with kidney and urinary tract diseases»	-	3	-	1, 2, 3, 4, 5, 8, 9, 12, 13, 15			Colloquium*; electronic tests; control papers; evaluation using

								electronic-mechanical simulators and robot simulators
2.16	Examination of patients with hematologic diseases	-	3	-	1, 2, 3, 4, 5, 8, 9, 12, 13, 15	1.Inspection and palpation of the lymph nodes of the head and neck. 2.Inspection and palpation of supra -, subclavian and axillary lymph nodes. 3. Inspection and palpation of inguinal and popliteal lymph nodes. 4. Palpation of the spleen. 5. Complete blood count interpretation	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests
2.17	Examination of patients with diseases of the thyroid gland, pancreas (diabetes mellitus). Examination of patients with musculoskeletal system diseases	-	3	-	1, 2, 3, 4, 5, 8, 12, 13, 15	1. Inspection of the skin and subcutaneous tissues. 2. Inspection and palpation of the thyroid gland. 3. Biochemical blood analysis interpretation	Performing a practical skill on simulative equipment or with the help of a stimulated participant	Interview; tests
2.18	Final class on the topics «Examination of patients with hematologic diseases», «Examination of patients with diseases of the thyroid gland, pancreas (diabetes mellitus)», «Examination of patients with musculoskeletal system diseases». Practical skills checking	-	3	-	1, 2, 3, 4, 5, 8, 11, 12, 13, 15	1. Inspection of the skin and subcutaneous tissues. 2. Inspection and palpation of the lymph nodes of the head and neck. 3. Inspection and palpation of supra -, subclavian and axillary lymph nodes. 4. Inspection and palpation of inguinal and popliteal lymph nodes. 5. Inspection and palpation of the thyroid gland. 6. Chest shape estimation (inspection and palpation).	Performing a practical skill on simulative equipment or with the help of a stimulated participant *	Interview; electronic tests. * Credit

						7. Palpation of chest pain points. 8. Comparative percussion of the lungs. 9. Assessment the inferior lung border. 10. Auscultation of the lungs. 11. Assessment the pulse on the radial, carotid arteries and dorsalis pedis artery. 12. Palpation of the apical impulse. 13. Assessment of the relative heart dullness borders. 14. Auscultation of the heart. 15. Superficial palpation of the abdomen. 16. Palpation of the sigmoid colon. 17. Palpation of the cecum. 18. Palpation of the transverse colon (with determination of the lower border of the stomach by the «rustle» method). 19. Assessment of the liver size according to M.G.Kurlov's method. 20. Palpation of the liver. 21. Palpation of the kidneys in the horizontal position. 22. Palpation of kidneys in the vertical position. 23. Palpation of the ureteral points, assessment of the kidney tenderness, auscultation of the renal arteries.		

						24. Palpation of the spleen		
	6 semester							
	Lectures	**6**	**-**	**3**				
1	Bronchial asthma. Chronic obstructive pulmonary disease. Pneumonia. Pleurisy. Acute and chronic respiratory failure	1,5	-	-	1, 15			
2	Acute rheumatic fever. Infectious endocarditis. Heart valve diseases.	-	-	1,5	1, 15			Tests; interview
3	Ischemic heart disease. Angina pectoris. Myocardial infarction. Acute and chronic heart failure. Cardiac arrhythmias and conduction disorders	1,5	-	-	1, 15			
4	Diseases of the digestive system: gastritis, stomach ulcer and duodenal ulcer. Liver diseases: hepatitis, liver cirrhosis	1,5	-	-	1, 15			
5	Kidney diseases: glomerulonephritis, pyelonephritis, acute kidney injury, chronic kidney disease	1,5	-	-	1, 15			
6	Hematologic diseases: anemia, hemoblastosis	-	-	1,5	1, 15			Tests; interview;
	Practical classes	**-**	**48**	**-**				
3.1	Bronchial asthma. Chronic obstructive pulmonary disease	-	3	-	1, 2, 3, 4, 6, 8, 12, 13, 15	1. X-ray of the chest in frontal (lateral) projection interpretation. 2. Sputum test interpretation	Solving situational problems	Interview; tests; solving situational problems
3.2	Pneumonia. Pleurisy	-	3	-	1, 2, 3, 4, 6, 8, 12, 13, 15	1. X-ray of the chest in frontal (lateral) projection interpretation. 2. Pleural fluid test interpretation	Solving situational problems	Interview; tests; solving situational problems

3.3	Acute rheumatic fever. Infective endocarditis	-	3	-	1, 2, 3, 4, 6, 8, 12, 13	ECG interpretation	Solving situational problems	Interview; tests; solving situational problems
3.4	Heart valve diseases	-	3	-	1, 2, 3, 4, 6, 8, 12, 13, 14, 15	1. ECG interpretation. 2. Auscultation of the heart *	Performing a practical skill on simulative equipment or with the help of a stimulated participant; solving situational problems	Interview; tests; solving situational problems
3.5	Arterial hypertension. Atherosclerosis	-	3	-	1, 2, 3, 4, 6, 8, 12, 13, 14, 15	ECG interpretation	Solving situational problems	Interview; tests; solving situational problems
3.6	Ischemic heart disease. Angina pectoris. Myocardial infarction	-	3	-	1, 2, 3, 4, 6, 8, 12, 13, 14, 15	ECG interpretation	Solving situational problems	Interview; tests; control papers solving situational problems
3.7	Acute and chronic heart failure. Cardiac arrhythmias and conduction disorders	-	3	-	1, 2, 3, 4, 6, 8, 12, 13, 14, 15	ECG interpretation	Solving situational problems	Electronic tests; control papers; evaluation using electronic-mechanical simulators and robot simulators
3.8	Diseases of the digestive system: gastritis, stomach ulcer and duodenal ulcer. Management of gastrointestinal bleeding	-	3	-	1, 2, 3, 4, 6, 8, 12, 13, 15	Biochemical blood analysis interpretation	Solving situational problems	Interview; tests; solving situational problems
3.9	Liver diseases: hepatitis, liver cirrhosis. The concept of diseases of gallbladder and pancreas	-	3	-	1, 2, 3, 4, 6, 8, 9,12,13	Biochemical blood analysis interpretation	Solving situational problems	Interview; tests; solving situational problems
3.10	Kidney diseases: glomerulonephritis, pyelonephritis, acute kidney injury, chronic kidney disease	-	3	-	1, 2, 3, 4, 6, 8, 9, 12, 13, 15	1. Urinalysis interpretation. 2. Nechiporenko's urine test interpretation. 3. Zimnitsky's urine test interpretation.	Solving situational problems	Interview; tests; solving situational problems

						4. Biochemical blood analysis interpretation		
3.11	Hematologic diseases: anemia, hemoblastosis	-	3	-	1, 2, 3, 4, 6, 8, 10, 12, 13, 15	Complete blood count interpretation	Solving situational problems	Interview; tests; solving situational problems
3.12	Thyroid diseases. Diabetes mellitus. Management of hyperglycemic and hypoglycemic comas	-	3	-	1, 2, 3, 4, 6, 8, 12, 13	Biochemical blood analysis interpretation	Solving situational problems	Interview; tests; solving situational problems
3.13	Diseases of the musculoskeletal system: arthritis in case of connective tissue diseases (rheumatoid arthritis), infectious arthritis, metabolic arthritis (osteoarthritis, gout)	-	3	-	1, 2, 3, 4, 6, 8, 12, 13, 15	1. Complete blood count interpretation. 2. Biochemical blood analysis interpretation	Solving situational problems	Interview; tests; solving situational problems
3.14	Acute allergic diseases. Management of anaphylactic shock	-	3	-	1, 2, 3, 4, 6, 8, 7,12,13			Interview; tests; solving situational problems
3.14	Presentation of the educational case history	-	3	-	1, 2, 3, 4, 6, 8, 15			Interview; presentation of the educational medical record of an outpatient (inpatient) patient
3.14	Final class on the section «Special Propaedeutics»	-	3	-	1, 2, 3, 4, 6, 7, 8, 10, 12, 13, 14, 15	1. Inspection of the skin and subcutaneous tissues. 2. Inspection and palpation of the lymph nodes of the head and neck. 3. Inspection and palpation of supra -, subclavian and axillary lymph nodes. 4. Inspection and palpation of inguinal and popliteal lymph nodes. 5. Inspection and palpation of the thyroid gland. 6. Chest shape estimation (inspection and palpation).	Performing a practical skill on simulative equipment or with the help of a stimulated participant *	Interview; electronic tests *

						7. Palpation of chest pain points. 8. Comparative percussion of the lungs. 9. Assessment the inferior lung border. 10. Auscultation of the lungs. 11. Assessment the pulse on the radial, carotid arteries and dorsalis pedis artery. 12. Palpation of the apical impulse. 13. Assessment of the relative heart dullness borders. 14. Auscultation of the heart. 15. Superficial palpation of the abdomen. 16. Palpation of the sigmoid colon. 17. Palpation of the cecum. 18. Palpation of the transverse colon. 19. Assessment of the liver size according to M.G.Kurlov's method. 20. Palpation of the liver. 21. Palpation of kidneys in the horizontal position. 22. Palpation of the kidneys in the vertical position. 23. Palpation of the ureteral points, assessment of the kidney tenderness, auscultation of the renal arteries. 24. Palpation of the spleen		
	Total hours	**24**	**138**	**9**				Examination

*This is a mandatory form of current certification

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic (relevant):

1. Pronko, T. P. Propedeutics of internal diseases : textbook. – Minsk : Aducakciya i vyhavanne, 2020. – 472 p.

Additional:

2. Kovalyova, O. M. Propedeutics of internal medicine : Part 1. Diagnostics : textbook for English learning students of higher medical schools. – Vinnytsia : Nova Knyha, 2017. – 424 p.

3. Kovalyova, O. M. Propedeutics of internal medicine : Part 2. Syndromes and diseases : textbook for English learning students of higher medical schools / O. M. Kovalyova. – Vinnytsia : Nova Knyha, 2017. – 264 p.

4. Bickley, Lynn S. Bates' guide to physical examination & history taking / ed. R. M. Hoffman. – Philadelphia : Wolters Kluwer, 2017. – 1034 p.

5. General propedeutics of internal diseases : lecture course / L. M. Nemtsov. – 2nd ed. – Vitebsk : VGMU, 2016. – 175 p.

6. Special propedeutics of internal diseases : lecture course / comp. by L. M. Nemtsov. – 2nd ed. – Vitebsk : VSMU, 2016. – 318 p.

7. Arsentyeva, I. L. Symptoms, diagnosis, principles of treatment and prevention of acute allergic diseases : teaching aid / I. L. Arsentyeva, E. A. Dotsenko, N. L. Arsentyeva. – Minsk : BSMU, 2021. – 31 p.

8. Arsentyeva, I. L. Educational case history : workbook / I. L. Arsentyeva, E. A. Dotsenko. – Minsk : BSMU, 2021. – 40 p.

9. Sholkova, M. V. Manual in Gastrointestinal System Examination : teaching aid / M. V. Sholkova, E. A. Dotsenko, I. I. Burakov. – Minsk : BSMU, 2019. – 40 p.

10. Pereverzeva, E. V. Semeiotics, diagnosis, principles of treatment of anemia and leukemia : teaching aid / E. V. Pereverzeva, I. M. Zmachinskaya. – Minsk : BSMU, 2019. – 16 p.

11. Propaedeutics of Internal Diseases : questions for classes and coloquiums / I. L. Arsentyeva [et al.]. – Minsk : BSMU, 2018. – 40 p.

12. Physical examination methods : workbook / E. A. Dotsenko [et al.]. – Minsk : BSMU, 2021. – 104 p.

13. Diagnostic methods in the internal medicine : teaching aid / E. A. Dotsenko [et al.]. – 2nd ed. – Minsk : BSMU, 2022. – 159 p.

14. Dotsenko, E. A. Cardiovascular syndromes : teaching aid / E. A. Dotsenko [et al.]. – Minsk : BSMU, 2022. – 27 p.

Electronic courseware for the educational discipline «Propaedeutics of Internal Diseases»

15. https://etest.bsmu.by/course/view.php?id=310.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

The time allotted for independent work can be used by students on:
preparing for lectures, practical classes;
preparing for credits and exam in the academic discipline;
studying the topics (issues) designed for independent work;
problem solving;
taking notes of educational literature;
compilation of a review of scientific literature on a given topic;
compilation of a thematic selection of literary sources, Internet sources;
preparation of tests by students for the organization of mutual knowledge assessment.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF SUPERVISED STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

APPROXIMATE LIST OF TASKS FOR SUPERVISED STUDENT INDEPENDENT WORK:
preparation of thematic reports, abstracts, presentations;
preparation of tests for the organization of mutual control;
design of information and demonstration materials (stands, posters, etc.).

FORMS OF CONTROL OF SUPERVISED STUDENT INDEPENDENT WORK:
interview;
tests;
defense of the abstract.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms are used for competence assessment:
control work;
tests;
electronic test;
colloquium;
interview;
defense of the educational case history;
solving situational problems;
assessment using electronic-mechanical and robotic simulators.

LIST OF AVAILABLE TEACHING METHODS

Traditional method (lecture, practical classes);
Active (interactive) methods:
- Problem-Based Learning (PBL);
- Team-Based Learning (TBL);
- Case-Based Learning (CBL);
- Research-Based Learning (RBL).
- training based on simulative technologies.

LIST OF PRACTICAL SKILLS

Name of practical skills	Practical skill control form
1. Inspection of the skin and subcutaneous tissues	Performing a practical skill on simulative equipment or with the help of a stimulated participant
2. Inspection and palpation of the lymph nodes of the head and neck	Performing a practical skill on simulative equipment or with the help of a stimulated participant
3. Inspection and palpation of supra - subclavian and axillary lymph nodes	Performing a practical skill on simulative equipment or with the help of a stimulated participant
4. Inspection and palpation of inguinal and popliteal lymph nodes	Performing a practical skill on simulative equipment or with the help of a stimulated participant
5. Inspection and palpation of the thyroid gland	Performing a practical skill on simulative equipment or with the help of a stimulated participant
6. Chest shape estimation (inspection and palpation)	Performing a practical skill on simulative equipment or with the help of a stimulated participant
7. Palpation of chest pain points	Performing a practical skill on simulative equipment or with the help of a stimulated participant
8. Comparative percussion of the lungs	Performing a practical skill on simulative equipment or with the help of a stimulated participant
9. Assessment the inferior lung border	Performing a practical skill on simulative equipment or with the help of a stimulated participant
10. Auscultation of the lungs	Performing a practical skill on simulative equipment or with the help of a stimulated participant
11. Assessment the pulse on the radial, carotid arteries and dorsalis pedis artery	Performing a practical skill on simulative equipment or with the help of a stimulated participant
12. Palpation of the apical impulse	Performing a practical skill on simulative equipment or with the help of a stimulated participant
13. Assessment of the relative heart dullness borders	Performing a practical skill on simulative equipment or with the help of a stimulated participant
14. Auscultation of the heart	Performing a practical skill on simulative equipment or with the help of a stimulated participant
15. Superficial palpation of the abdomen	Performing a practical skill on simulative equipment or with the help of a stimulated participant

Name of practical skills	Practical skill control form
16. Palpation of the sigmoid colon	Performing a practical skill on simulative equipment or with the help of a stimulated participant
17. Palpation of the cecum	Performing a practical skill on simulative equipment or with the help of a stimulated participant
18. Palpation of the transverse colon	Performing a practical skill on simulative equipment or with the help of a stimulated participant
19. Assessment of the liver size according to M.G.Kurlov's method	Performing a practical skill on simulative equipment or with the help of a stimulated participant
20. Palpation of the liver	Performing a practical skill on simulative equipment or with the help of a stimulated participant
21. Palpation of kidneys in the horizontal position	Performing a practical skill on simulative equipment or with the help of a stimulated participant
22. Palpation of the kidneys in the vertical position	Performing a practical skill on simulative equipment or with the help of a stimulated participant
23. Palpation of the ureteral points, assessment of the kidney tenderness, auscultation of the renal arteries	Performing a practical skill on simulative equipment or with the help of a stimulated participant
24. Palpation of the spleen	Performing a practical skill on simulative equipment or with the help of a stimulated participant
25. Complete blood count interpretation	Solving situational problems
26. Urinalysis interpretation	Solving situational problems
27. Biochemical blood analysis interpretation	Solving situational problems
28. Sputum test interpretation	Solving situational problems
29. Pleural fluid test interpretation	Solving situational problems
30. Nechiporenko's urine test interpretation	Solving situational problems
31. Zimnitsky's urine test interpretation	Solving situational problems
32. X-ray of the chest in frontal (lateral) projection interpretation	Solving situational problems
33. ECG interpretation	Solving situational problems

LIST OF SIMULATION EQUIPMENT USED

1. Manikin «Physico».
2. Auscultation manikin (heart and lung auscultation)
3. Auscultation simulator.
4. Abdominal palpation manikin.

**PROTOCOL OF THE CURRICULUM APPROVAL
BY OTHER DEPARTMENTS**

Title of the discipline requiring approval	Department	Amendments to the curriculum in the academic discipline	Decision of the department, which designed the curriculum (date, protocol #)
1. Internal Diseases	Department of Internal Medicine, Gastroenterology and Nutrition with training and advanced training courses	There are no offers	Protocol # 1 of 28.09.2024
	Department of Internal Diseases, Cardiology and Rheumatology with a course of advanced training and retraining	There are no offers	Protocol # 1 of 28.09.2024
	Department of Cardiology and Internal Diseases	There are no offers	Protocol # 1 of 28.09.2024
2. Outpatient Therapy	Department of Outpatient Therapy	There are no offers	Protocol # 1 of 28.09.2024
3. Clinical Immunology, Allergology	Department of Propaedeutics of Internal Diseases	There are no offers	Protocol # 1 of 28.09.2024

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Curriculum content, composition and the accompanying documents comply with the established requirements.

Head of the Department of Educational Activities of the Educational Institution «Belarusian State Medical University»
18.11.2024 _____ I.L.Kotovich

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18.11.2024 _____ S.V.Zaturanova