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

Контрольный экземпляр

APPROVED
by Rector of the Educational Institution «Belarusian State Medical University»
_____ S.P.Rubnikovich
25.06.2026
Reg.# UD-0311-01-60/2627/edu. sub.

INTERNAL DISEASES

Curriculum of the Educational Institution in the Academic Discipline for the Specialty 1-79 01 01 «General Medicine»

Sub-Residency «General Medical Practice»

2026

Curriculum is based on the educational program «Internal Diseases», approved 25.06.2026, registration # УД-0911-01-52/2627/уч.суб.; on the educational plan in the specialty 1-79 01 01 «General Medicine», approved 15.04.2026, registration # 7-07-0911-01/2627/mf

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RECOMMENDED FOR APPROVAL:

by the Department of Internal Medicine, Gastroenterology and Nutrition with training and advanced training courses of the Educational Institution «Belarusian State Medical University»
(protocol # 15 of 17.04.2026);

by the Scientific and Methodological Council of the Educational Institution «Belarusian State Medical University»
(protocol # 10 of 25.06.2026)

EXPLANATORY NOTE

The aim of the academic discipline «Internal Diseases» is the formation of specialized competencies for the construction of clinical diagnosis, medical care, prevention of diseases of human internal organs.

The objectives of the academic discipline «Internal Diseases» are to form students' scientific knowledge about etiology, pathogenesis, clinical picture, diagnosis, principles of treatment, prevention of major diseases of internal organs of man, skills and abilities necessary for:

medical history taking and physical examination;

developing diagnostic workup plans, including laboratory and instrumental investigations;

clinical interpretation of laboratory and instrumental test results;

diagnosis and differential diagnosis of internal diseases (diseases of internal organs;

determining indications for inpatient admission, day hospital care, specialist referrals and specialized diagnostic or therapeutic modalities;

objective assessment of the clinical course of internal diseases and selection of individualized management strategies in an internal medicine ward setting;

conducting health surveillance (dispensary care) and medical rehabilitation for patients with major internal diseases;

providing emergency and urgent medical care for life-threatening conditions in patients with internal diseases;

ensuring epidemiological safety and infection control during healthcare delivery.

Relations to other academic disciplines

Teaching and successful study of the academic discipline «Internal Diseases» is carried out on the basis of the knowledge and skills previously acquired by the students in the following modules: «Clinical Pathology and Clinical Diagnostics», «Internal Medicine», «Therapy Module #3».

Studying the academic discipline «Internal Diseases» should ensure the formation of students' specialized competencies: conducting examination, diagnosis, differential diagnosis and treatment of internal diseases, including urgent and life-threatening conditions.

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

know:

risk factors, etiology, pathogenesis of major diseases of internal organs;

features of the clinical picture, modern methods of diagnostics, differential diagnosis of the main internal organs diseases;

principles of treatment, prevention, medical rehabilitation for the main diseases of internal organs;

principles of medical ethics and deontology;

be able to:

conduct patient examination and evaluate the detected changes of the various organs and systems;

determine and order laboratory and instrumental investigations necessary to establish a diagnosis;

determine and assign minimum laboratory and instrumental investigations required for diagnosis;

evaluate and interpret the results of the examination (clinical and biochemical tests, sternal puncture, electrocardiogram, spirometry, bicycle ergometry, daily monitoring of blood pressure and electrocardiogram, bronchoscopy and esophagogastroscopy, x-rays, ultrasound and etc.);

choose the best treatment for a particular patient, individualized drug therapy considering mechanisms of action, pharmacokinetics and pharmacodynamics of drugs, preventing their undesirable side effects, possible interactions with concomitant administration of other drugs; recommend non-drug therapy;

choose dosage form, dose and route of administration of drugs, implement the dosing regimen;

appoint and hold antibacterial, anti-inflammatory, immunosuppressive, antiplatelet and anticoagulant therapy;

write out prescriptions for regular medications;

provide emergency medical care for the most common emergency situations in professional activity: hypertensive crisis, an asthma attack, pulmonary embolism, acute coronary syndrome, angina attacks, myocardial infarction, cardiac asthma and pulmonary edema, cardiogenic shock, fainting, collapse, life-threatening disturbances of heart rhythm and conduction, an attack of renal and hepatic colic, acute pancreatitis, coma with diabetes mellitus, anaphylactic shock, pulmonary, gastrointestinal bleeding;

carry out cardio-pulmonary resuscitation;

give the patient recommendations for the prevention of diseases of internal organs, healthy lifestyle, taking into account the state of health;

master:

performing patient physical examination;

ECG recording and interpretation techniques;

performing blood glucose monitoring;

performing peak flow cytometry and interpreting its results.

Organization of the educational process

Practical classes are conducted within the therapeutic departments of hospital healthcare organizations and at the higher education simulation and assessment center. Practical training is supported by students solving situational tasks and tests as well as practicing skills in patient examination, diagnosis and differential diagnosis of diseases.

Total number of hours for the study of the academic discipline is 396 academic hours, of which 240 classroom hours and 156 hours of student independent work. Classroom hours according to the types of studies: lectures – 9 hours (including 3 hours of supervised student independent work), practical classes – 231 hours.

Form of higher education – full-time.

Intermediate assessment is carried out according to the syllabus of the specialty in the form of a credit (11/12 semester).

THEMATIC PLAN

Section (topic) name	Number of class hours	
	lectures	practical
1. Respiratory diseases	**1,5**	**35**
1.1. Differential diagnosis and treatment for bronchial obstruction syndrome	-	7
1.2. Differential diagnosis and treatment for pulmonary infiltration syndrome	-	7
1.3. Differential diagnosis and treatment in the presence of fluid in the pleural cavity, pleural diseases, acute and chronic respiratory failure	-	7
1.4. Differential diagnosis and treatment of interstitial lung diseases	1,5	7
1.5. Differential diagnosis and treatment of suppurative lung diseases. Differentiated antibacterial therapy for lung diseases	-	7
2. Circulatory system diseases	**3**	**63**
2.1. Differential diagnosis of chest pain	1,5	3
2.2. Diagnosis and treatment of chronic coronary syndromes	-	4
2.3. Diagnosis and treatment of acute coronary syndrome without ST-segment elevation.	-	7
2.4. Differential diagnosis and treatment of myocardial infarction	-	7
2.5. Differential diagnosis and treatment of arterial hypertension	-	7
2.6. Differential diagnosis and differentiated treatment of cardiac arrhythmias	-	7
2.7. Differential diagnosis and differentiated treatment of cardiac conduction disorders	-	7
2.8. Differential diagnosis of cardiomegaly. Diagnosis and treatment of non-coronary myocardial lesions	-	7
2.9. Diagnosis and treatment of endocardial and pericardial lesions	-	7
2.10. Differential diagnosis of dyspnea and edema syndrome. Differentiated treatment of chronic heart failure	1,5	7
3. Digestive system diseases	-	**42**
3.1. Differential diagnosis and treatment of diseases of the esophagus	-	7
3.2. Differential diagnosis and treatment of gastroduodenal zone diseases	-	7
3.3. Differential diagnosis and treatment of chronic hepatitis and liver cirrhosis	-	7
3.4. Differential diagnosis of jaundice and hepatosplenomegaly	-	7
3.5. Differential diagnosis and treatment of pancreatic diseases, in abdominal pain syndrome	-	7

Section (topic) name	Number of class hours	
	lectures	practical
3.6. Differential diagnosis and treatment of inflammatory bowel diseases, in irritable bowel syndrome	-	7
4. Joint and connective tissue diseases	**3**	**49**
4.1. Diagnostic methods for rheumatic diseases. Modern treatment options for rheumatic diseases	-	7
4.2. Differential diagnosis and treatment of rheumatoid arthritis and osteoarthritis	-	7
4.3. Differential diagnosis and treatment of spondyloarthritis, arthritis associated with infection and erythema nodosum	-	7
4.4. Differential diagnosis and treatment of microcrystalline arthritides	-	4
4.5. Differential diagnosis and treatment of osteoporosis	1,5	3
4.6. Differential diagnosis of connective tissue systemic diseases. Antiphospholipid syndrome	-	7
4.7. Differential diagnosis of systemic vasculitides	-	7
4.8. Principles of treatment for systemic connective tissue diseases and systemic vasculitides	1,5	7
5. Kidney diseases	**-**	**21**
5.1. Diagnostic capabilities of laboratory and instrumental research methods in nephrology. Differential diagnosis and treatment of tubulointerstitial kidney diseases	-	7
5.2. Differential diagnosis and treatment of nephritic syndromes. Differential diagnosis in nephrotic syndrome, principles of treatment	-	7
5.3. Renal lesions in diabetes mellitus, systemic connective tissue diseases, systemic vasculitis, gout, multiple myeloma. Differential diagnosis in chronic kidney disease, treatment principles	-	7
6. Blood system diseases	**1,5**	**21**
6.1. Differential diagnosis and treatment in anemic syndrome	-	7
6.2. Differential diagnosis and treatment of leukemoid reactions, hemoblastoses	-	7
6.3. Differential diagnosis and treatment of hemorrhagic diatheses	1,5	7
Total hours	**9**	**231**

CONTENT OF THE ACADEMIC DISCIPLINE

1. Respiratory diseases

1.1. Differential diagnosis and treatment for bronchial obstruction syndrome

Topical issues of medical ethics and deontology. Principles of formation of the personality of a medical worker. The main models for building doctor-patient

communications.

Differential diagnostics between various types of broncho-obstructive syndrome: asthmatic, allergic, autoimmune, infectious-inflammatory, obstructive, dyskinetic, emphysematous, hemodynamic, endocrine-humoral, neurogenic and others. The value of spirography, studies of the gas composition of blood and exhaled air, bronchoscopy, chest computed tomography (CT) scan. Principles of asthma and chronic obstructive pulmonary disease treatment.

Examination of patients with diseases that occur with bronchial obstruction (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, drawing up medical records.

Algorithm for providing emergency medical care for broncho-obstructive syndrome.

1.2. Differential diagnosis and treatment for pulmonary infiltration syndrome

Definition of the term «pulmonary infiltration syndrome». Causes of infiltration. Inflammatory and non-inflammatory infiltrates.

Tumor infiltrates. Lung cancer. Pulmonary tuberculosis.

Differential diagnosis of specific, allergic infiltrates, infiltrates with venous thromboembolism, systemic connective tissue diseases, congestive-hypostatic disorders in the lungs.

Fungal lesions of the lungs. Pulmonary eosinophilia.

Differential diagnosis of lung atelectasis.

Tactics of the general practitioner in the examination and treatment of patients with lung diseases. Sputum examination. Indications for diagnostic bronchoscopy, radiographs (X-ray picture), chest CT scan.

Examination of patients with pneumonia and other pulmonary pathology (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

1.3. Differential diagnosis and treatment in the presence of fluid in the pleural cavity, pleural diseases, acute and chronic respiratory failure

Clinical and X-ray picture with pleural effusion. Additional research methods: ultrasound, computed tomography. Technique and results interpretation of pleural puncture. Complications of pleural puncture. Differential diagnosis of pleural effusion.

Sacculated pleuritis. Empyema. Spontaneous pneumothorax: diagnosis, emergency medical care.

Management of patients with pleura diseases. Treatment of pleura diseases.

Acute and chronic respiratory failure. Classification. Diagnosis. Treatment methods. Indications for lung transplantation.

Examination of patients with pleura diseases (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up

medical records.

Algorithm for providing emergency medical care for acute respiratory failure.

1.4. Differential diagnosis and treatment of interstitial lung diseases

Features of the clinical picture and instrumental-laboratory changes in interstitial lung diseases. Differential diagnosis in interstitial and disseminated processes in the lungs. Idiopathic pulmonary fibrosis, exogenous (toxic) alveolitis, disseminated and miliary pulmonary tuberculosis, pneumoconiosis, sarcoidosis, lung damage in vasculitis and diffuse connective tissue diseases, tumor dissemination in the lungs.

Spirometry, diagnostic bronchoscopy, chest CT scan in the diagnosis of interstitial lung diseases. Indications for lung biopsy. Treatment of idiopathic pulmonary fibrosis.

Examination of patients with interstitial lung disease (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

1.5. Differential diagnosis and treatment of suppurative lung diseases. Differentiated antibacterial therapy for lung diseases

Acute and chronic purulent destruction of the lungs, lung abscess, pulmonary gangrene: features of development, clinical manifestations. Diagnostic plan of examination.

The choice of treatment tactics for patients with lung diseases, treatment features.

The main groups of antibiotics. Antibiotics for the treatment of community-acquired pneumonia caused by atypical pathogens, nosocomial pneumonia. Antifungal antibiotics. Differentiated antibiotic therapy by methods of usage, duration of therapy, combinations of antibiotics. Adverse reactions to antibacterial drugs. The use of antiviral drugs in pulmonology. Prevention of lung diseases.

Examination of patients with respiratory pathology (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

2. Circulatory system diseases

2.1. Differential diagnosis of chest pain

Possible causes of chest pain. The concept of acute aortic syndrome. Management of patients with dissecting aortic aneurysm. Pathology of the myocardium, pericardium, manifested by pain in the heart. Chest pain associated with pathology of the pleura, lungs, spine.

Pulmonary thromboembolism, diagnostic and treatment algorithm. Differential diagnosis of pain in the chest.

Examination of patients with chest pain (complaints and medical history, physical examination); planning Interviews; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

2.2. Diagnosis and treatment of chronic coronary syndromes

Prevalence and classification of coronary heart disease (CHD). Definition of the concept of «ischemic cascade». Painless myocardial ischemia. Distinctive features of ischemic pain. Relief of pain. Classification, diagnosis and treatment of stable angina. Risk stratification of cardiovascular complications. Electrocardiography (ECG) and Holter monitoring in the diagnosis of chronic coronary insufficiency. Load tests with physical and drug load. Non-invasive methods for diagnosing CHD. Indications for target and diagnostic coronary angiography.

Examination of patients with circulatory system diseases (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

2.3. Diagnosis and treatment of acute coronary syndrome without ST-segment elevation

Definition, diagnosis of acute coronary syndrome, organizational tactics of a general practitioner. GRACE risk stratification. Emergency medical care at different levels (general practitioner, emergency physician, cardiology hospital doctor), differentiated approach to the treatment of patients with acute coronary syndrome without ST segment elevation. Indications for percutaneous coronary intervention and cardiac surgery.

Examination of patients with acute coronary syndrome (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

Algorithm for providing emergency medical care for acute coronary syndrome without ST segment elevation.

2.4. Differential diagnosis and treatment of myocardial infarction

Myocardial infarction: definition and risk factors, classification, main atypical forms of myocardial infarction (MI). Severity Classes (Killip classification). Electrocardiographic and laboratory diagnosis of MI. Markers of myocardial necrosis. The value of echocardiographic examination. Pharmacotherapy and Reperfusion Strategies. Thrombolytic and anticoagulant therapy. Indications for invasive and surgical management.

Examination of patients with myocardial infarction: complaints and history of the disease, physical examination; drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

2.5. Differential diagnosis and treatment of arterial hypertension

Prevalence, modern classification, risk stratification, variants of the development and complications of arterial hypertension. Classification of symptomatic hypertension. Features of clinical manifestations of nephrogenic, endocrine, hemodynamic and other arterial hypertension. ECG with myocardial hypertrophy. Plan

and algorithm for examining patients with increased blood pressure. Interpretation of 24-hour blood pressure monitoring (ABPM). Differential diagnosis of primary and secondary arterial hypertension. The objectives of the treatment of hypertension, differentiated approach to treatment. Target blood pressure in various diseases of internal organs. Modern antihypertensive drugs. Prevention of sudden death, heart attack and stroke in people with arterial hypertension.

Examination of patients with arterial hypertension (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

Emergency medical care algorithm for hypertensive crisis.

2.6. Differential diagnosis and differentiated treatment of cardiac arrhythmias

Etiology, pathogenesis and electrophysiological mechanisms of cardiac arrhythmias. Classification of arrhythmias. Main diagnostic methods for cardiac arrhythmias, ambulatory ECG monitoring.

Premature contractions (Extrasystoles): Lown classification, clinical manifestations, ECG diagnosis, antiarrhythmic therapy and medical prevention.

Paroxysmal rhythm disturbances. Atrial fibrillation and atrial flutter: etiology, pathogenesis, classification, hemodynamic disturbances and clinical manifestations. Pharmacological management of atrial fibrillation and atrial flutter: specific approaches to paroxysmal and permanent forms, thromboembolic and bleeding risk stratification scores, antiplatelet and anticoagulant therapy. Patient preparation for cardioversion. Prognosis in atrial fibrillation and atrial flutter.

Paroxysmal cardiac arrhythmias, clinical presentations (hemodynamic features during a paroxysm). ECG diagnosis of paroxysmal tachycardia. Differential diagnosis of ventricular and supraventricular paroxysmal tachycardia. Localization (topical diagnosis) of tachyarrhythmias. Protocols (algorithms) for terminating a paroxysm of paroxysmal tachycardia. Indications for electrical cardioversion and transcatheter radiofrequency ablation of the arrhythmia substrate. Medical prevention of paroxysmal tachycardia episodes. Prognosis in paroxysmal cardiac arrhythmias.

Arrhythmogenic syndromes. Ventricular pre-excitation syndromes (WPW syndrome, CLC syndrome).

Ventricular fibrillation: etiology, clinical presentations, ECG diagnosis, resuscitation protocols (algorithms), sudden cardiac death (main causes and medical prevention). Risk assessment and methods for reducing the risk of sudden death.

Examination of patients with disturbances of heart rhythm (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

Algorithm for providing emergency medical care for supraventricular tachycardia.

2.7. Differential diagnosis and differentiated treatment of cardiac conduction disorders

Heart blocks (sinoatrial, atrioventricular and intraventricular): etiology, pathogenesis and ECG diagnosis. Complications of heart blocks: Morgagni-Adams-Stokes syndrome, heart failure. Pharmacological management of acute bradyarrhythmias in atrioventricular blocks, temporary cardiac pacing and indications for permanent pacemaker implantation. Prognosis in heart blocks.

Sick sinus syndrome: classification, diagnosis and management (emergency medications, indications for permanent pacemaker implantation).

Indications for the implantation of intracardiac devices (pacemakers, cardiac resynchronization therapy devices, cardioverter-defibrillators).

Examination of patients with disturbances of heart conduction (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

2.8. Differential diagnosis of cardiomegaly. Diagnosis and treatment of non-coronary myocardial lesions

Cardiomyopathies: definition, etiology and classification. Pathogenesis of intracardiac hemodynamic disturbances in dilated, hypertrophic and restrictive cardiomyopathy. Main clinical syndromes in cardiomyopathies. Instrumental diagnostic methods for cardiomyopathies: ECG, echocardiography, MRI, radionuclide techniques and myocardial biopsy. Principles of treatment for cardiomyopathies, indications for surgical management. Prognosis in cardiomyopathies.

Instrumental and laboratory diagnostic methods for inflammatory myocardial diseases. Diagnosis of myocarditis. Endomyocardial biopsy and its indications. Differential diagnosis. ECG changes in hormonal and metabolic disorders and myocardial inflammation. Risk factors, etiological factors, clinical presentations, classification, diagnostic methods and treatment.

Examination of patients with cardiomyopathies (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

2.9. Diagnosis and treatment of endocardial and pericardial lesions

Diagnostic criteria, principles of differential diagnosis of infective endocarditis. «Masks» of infective endocarditis. Ways to verify the diagnosis. Indications for cardiac and drug treatment. The basic principles of antibiotic therapy. Prevention of infective endocarditis.

Acute rheumatic fever, chronic rheumatic heart disease with valvular involvement. Diagnostic criteria. Diagnosis. Differential diagnosis. Treatment. Medical prevention.

Pericarditis. Classification. Clinical manifestations of exudative (pericardial effusion) pericarditis. Diagnosis. Complications. Cardiac tamponade. Diagnostic and therapeutic pericardiocentesis, indications for the procedure. Treatment of acute and

recurrent pericarditis.

Examination of patients with infective endocarditis or pericarditis (collection of complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

2.10. Differential diagnosis of dyspnea and edema syndrome. Differentiated treatment of chronic heart failure

Types of dyspnea and their causes. Edema: manifestations, types and underlying causes. Diagnosis of edemas (edematous syndrome).

Heart failure: definition, concept, classification. The advantages and disadvantages of the used classifications of chronic heart failure. Latent heart failure. The basic principles of diagnosis and differential diagnosis. Modern approaches to the treatment of chronic heart failure. Algorithms of treatment.

Chronic cor pulmonale: causes, diagnosis and treatment.

Heart transplantation: indications.

Examination of patients with chronic cardiovascular insufficiency (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

3. Digestive system diseases

3.1. Differential diagnosis and treatment of diseases of the esophagus

The significance of digestive system diseases in general medical practice.

Esophageal dysphagia, causes of appearance. Symptomatology of diseases of the esophagus. Differential diagnosis in violation of swallowing. The main methods of diagnosis, differential diagnosis and treatment of diseases of the esophagus.

Gastroesophageal reflux disease (GERD), achalasia of the cardia, Barret esophagus, esophagitis, esophagus cancer – differential diagnosis, patient management.

Examination of patients with pathology of the esophagus (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

3.2. Differential diagnosis and treatment of gastroduodenal zone diseases

The main methods of diagnosis and differential diagnosis of functional dyspepsia, chronic gastritis, gastroduodenal ulcers and neoplasms. Diagnosis of complications of gastroduodenal ulcers.

Differentiated therapy for lesions of the gastroduodenal region. The role of physiotherapy in ulcer treatment. Medical prevention of ulcer recurrences.

Examination of patients with pathology of the gastroduodenal zone (complaints and anamnesis of diseases, physical examination); drawing up an investigation plan; interpretation of the results of laboratory and instrumental research methods; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical

care, drawing up medical records.

3.3. Differential diagnosis and treatment of chronic hepatitis and liver cirrhosis

Etiological classification of chronic hepatitis. Definition of nosological forms: autoimmune hepatitis, chronic hepatitis B, chronic hepatitis D, chronic hepatitis C, drug-induced hepatitis, Wilson-Konovalov disease, liver disease caused by α1-antitrypsin deficiency. Clinical and laboratory symptoms of chronic hepatitis. Drugs that cause toxic liver disease. Drugs for etiotropic therapy.

Alcoholic hepatitis. Doses of alcohol that increase the risk of liver damage. Signs of alcohol damage to other organs (chronic pancreatitis, Dupuytren contracture, myocardiodystrophy, encephalopathy, polyneuropathy), concomitant manifestations (nutritional deficiency, vitamin deficiency), liver biopsy. Clinical picture. Features of laboratory diagnosis. Treatment.

Non-alcoholic and alcoholic steatohepatitis. Diagnosis. Treatment.

Biliary, viral, alcoholic cirrhosis, cirrhosis in hereditary diseases (Wilson-Konovalov disease, liver disease caused by α1-antitrypsin deficiency, hemochromatosis). The main clinical syndromes and symptoms. Complications. Differential diagnosis. Features of treatment of certain forms of cirrhosis. Indications for liver transplantation.

Examination of patients with liver pathology (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

3.4. Differential diagnosis of jaundice and hepatosplenomegaly

Classification of jaundices. Laboratory and instrumental diagnostics for jaundice. General practitioner's approach upon detecting hemolytic, parenchymal, or obstructive jaundice. Cholelithiasis, cholangitis, dysfunction of the gallbladder and the sphincter of Oddi: diagnosis, differential diagnosis, indications for surgical treatment. The role of ultrasound and CT of the abdominal organs in the differential diagnosis of jaundices, gallbladder pathology and biliary tract diseases.

Differential diagnosis in hepatosplenomegaly, general practitioner’s approach upon detection of the condition. Indications for consultation with a surgeon, hematologist, or oncologist.

Examination of patients with liver pathology (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

3.5. Differential diagnosis and treatment of pancreatic diseases, in abdominal pain syndrome

Diagnosis and differential diagnosis of chronic pancreatitis, patient examination program, main directions of conservative treatment. Diseases associated with elevated IgG4 levels. Features of diagnosis and treatment.

Differential diagnosis of abdominal pain syndrome: definition, clinical

manifestations, diagnostic algorithm, differential diagnosis in cases of acute abdomen, and patient management strategies.

Definition of «dietary (therapeutic) nutrition» and principles of dietary planning for digestive system diseases. Definition of nutritional risk and nutritional support for patients.

Examination of patients with pancreatic pathology (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

3.6. Differential diagnosis and treatment of inflammatory bowel diseases, in irritable bowel syndrome

Inflammatory bowel diseases (ulcerative colitis, Crohn's disease): diagnostic criteria (clinical, endoscopic, histological, cytological, radiological, laboratory), extraintestinal manifestations, complications, differential diagnosis, principles of drug therapy, indications for surgical treatment.

Diverticular disease of the intestine, ischemic bowel disease, intestinal neoplasms: general practitioner's approach upon disease detection.

Irritable bowel syndrome: patient examination program, directions for conservative treatment.

Examination of patients with intestinal pathology (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

4. Joint and connective tissue diseases

4.1. Diagnostic methods for rheumatic diseases. Modern treatment options for rheumatic diseases

Physical examination of patients with musculoskeletal system pathology. Laboratory tests to identify inflammatory and autoimmune markers (rheumatoid factor, anti-CCP, ANA), instrumental visualization of joints (ultrasound, radiological examination, MRI) and genetic testing.

Non-steroidal anti-inflammatory drugs (NSAIDs): features, mechanism of action, classification, effectiveness. The interaction of NSAIDs with other drugs. Adverse reactions: NSAID-gastropathy, the risk of cardiovascular complications. The mechanism of action of glucocorticosteroid hormones, indications and contraindications for their purpose. Pulse therapy: indications, contraindications, adverse reactions. Cytostatics used in rheumatic diseases. Genetically engineered biological drugs, indications for use. Extracorporeal treatment in rheumatology: indications, contraindications, adverse reactions.

Examination of patients with diseases of joints and connective tissue (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

4.2. Differential diagnosis and treatment of rheumatoid arthritis and osteoarthritis

Rheumatoid arthritis: etiology, immunopathogenesis, classification, diagnostic criteria, differential diagnosis and modern treatment strategies. Main mechanisms of action of glucocorticoids, local and systemic use, pulse therapy, indications and contraindications for administration, adverse reactions. Basic anti-inflammatory drugs: synthetic and genetically engineered biologics, indications and contraindications, prescribing procedures, adverse reactions and complications.

Osteoarthritis: etiology, pathogenesis, classification, phenotypes of osteoarthritis, objective examination and instrumental diagnostic methods, non-pharmacological treatment methods and pharmacotherapy, surgical treatment.

Provision of palliative care: principles of diagnosis and treatment of chronic pain syndrome.

Examination of patients with rheumatoid arthritis and osteoarthritis (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

4.3. Differential diagnosis and treatment of spondyloarthritis, arthritis associated with infection and erythema nodosum

Spondyloarthritides (ankylosing spondylitis; reactive arthritis; arthritis associated with inflammatory bowel diseases; psoriatic arthritis): classification, clinical features (inflammatory back pain, enthesitis), differential diagnosis, treatment principles, rehabilitation.

Infectious arthritis (tuberculous, viral, Lyme arthritis): clinical features, diagnosis and treatment principles.

Erythema nodosum: etiology, pathogenesis, patient screening, differential diagnosis (erythema annulare, sarcoidosis, erysipelas, etc.). Treatment.

Examination of patients with spondyloarthritis (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

4.4. Differential diagnosis and treatment of microcrystalline arthritides

Microcrystalline arthritides (calcium pyrophosphate deposition disease, basic calcium phosphate deposition disease, calcium oxalate deposition disease): clinical features, diagnosis, treatment.

Gout and hyperuricemia: clinical criteria and features, diagnosis, treatment.

Treatment of acute gout flares. Nonsteroidal anti-inflammatory drugs (NSAIDs), colchicine, glucocorticoids.

Examination of patients with microcrystalline arthritis (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

4.5. Differential diagnosis and treatment of osteoporosis

Osteoporosis: definition, classification, clinical features, diagnostic criteria and methods, treatment, prognosis. Glucocorticoid-induced osteoporosis: diagnostic specificities, prevention and treatment.

Essential medicines for osteoporosis treatment (bisphosphonates, monoclonal antibodies (Denosumab), hormone replacement therapy), indications and contraindications, prescribing procedures, adverse drug reactions. Prevention of osteoporosis and low-trauma fractures.

Examination of patients with osteoporosis: taking history and complaints, physical examination, developing a diagnostic workup plan, interpreting laboratory and imaging test results, making a diagnosis, creating a treatment plan, medical documentation.

4.6. Differential diagnosis of connective tissue systemic diseases. Antiphospholipid syndrome

Systemic connective tissue diseases (SLE, polymyositis, dermatomyositis, systemic sclerosis, Sjögren's syndrome): clinical features, diagnosis, treatment strategy. Detection of autoantibodies. Outcome and prognosis of systemic connective tissue diseases.

Antiphospholipid syndrome. Classification. Diagnostic and treatment algorithm.

Examination of patients with systemic connective tissue diseases (complaints and medical history, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

4.7. Differential diagnosis of systemic vasculitides

Classification of systemic vasculitides. Differential diagnosis between primary and secondary vasculitides. Clinical presentation, laboratory and imaging specificities depending on the caliber of the affected vessels.

Polymyalgia rheumatica and giant cell arteritis: clinical features, diagnosis, treatment, prognosis.

ANCA-associated vasculitides: diagnosis, clinical features, treatment, prognosis.

Examination of patients with systemic connective tissue diseases (complaints and medical history, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

4.8. Principles of treatment for systemic connective tissue diseases and systemic vasculitides

The goal of therapy for systemic connective tissue diseases and systemic vasculitides. A differentiated approach depending on disease activity and organ involvement.

General principles and approaches to the treatment of connective tissue diseases and systemic vasculitides. Main groups of medications (synthetic disease-modifying

antirheumatic drugs, biologic disease-modifying antirheumatic drugs, glucocorticoids), indications and contraindications, prescribing procedures, adverse reactions and complications. Plasmapheresis. Induction and maintenance therapy. Symptomatic therapy for systemic connective tissue diseases.

Examination of patients with systemic connective tissue diseases and systemic vasculitides: taking history and complaints, physical examination, developing a diagnostic workup plan, interpreting laboratory and imaging test results, making a diagnosis, creating a treatment plan, medical documentation.

5. Kidney diseases

5.1. Diagnostic capabilities of laboratory and instrumental research methods in nephrology. Differential diagnosis and treatment of tubulointerstitial kidney diseases

Impaired filtration, reabsorption and secretion. The most important renal functions (urination; regulation of homeostasis; synthesis and increment of biologically active substances; regulation of hematopoiesis). Laboratory methods of examination of patients with kidney disease (urinary syndrome). Instrumental methods for the diagnosis of renal pathology. Methods for studying the kidneys functional state.

Biopsy of the kidney (indications and contraindications).

Tubulointerstitial kidney diseases: etiology, clinical presentation, specificities of drug-induced tubulointerstitial nephritis, treatment, prognosis.

Pyelonephritis. Risk factors for pyelonephritis. Modern methods of diagnosis of pyelonephritis. Antibacterial therapy for pyelonephritis. Criteria of antibacterial drugs selection.

Examination of patients with kidney and urinary tract diseases (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

5.2. Differential diagnosis and treatment of nephritic syndromes. Differential diagnosis in nephrotic syndrome, principles of treatment

Differential diagnosis and treatment of acute, rapidly progressive and chronic nephritic syndromes. Kidney biopsy: indications and contraindications. Chronic glomerulonephritis. Classification. Morphological types of glomerular kidney diseases. Pathogenetic therapy.

Definition of the term «nephrotic syndrome». The main symptoms. Diseases contributing to the development of the syndrome. Clinical manifestations. Diagnostic capabilities. Differential diagnosis. Treatment strategy.

Examination of patients with kidney and urinary tract diseases (complaints and anamnesis of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

5.3. Renal lesions in diabetes mellitus, systemic connective tissue diseases, systemic vasculitis, gout, multiple myeloma. Differential diagnosis in chronic kidney disease, treatment principles

Mechanisms of kidney damage in diabetes mellitus, systemic connective tissue

diseases, systemic vasculitis, gout, multiple myeloma. Clinical and laboratory manifestations. Diagnostic capabilities. Principles of treatment.

Acute kidney injury: definition, main symptoms, classification, diagnosis, treatment, outcomes.

Chronic kidney disease: main causes, classification, nephroprotective therapy, medical surveillance of patients by general practitioners. Indications for kidney transplantation.

Examination of patients with kidney pathology in diabetes mellitus, systemic connective tissue diseases, systemic vasculitis, gout (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

6. Blood system diseases

6.1. Differential diagnosis and treatment in anemic syndrome

Classification of anemia. Differential diagnosis. Diagnostic algorithm for anemic syndrome. Iron deficiency, B12-deficient and folic-deficient, hemolytic, aplastic anemia, anemia of chronic disease, anemia in patients with chronic kidney disease. Principles of treatment. Criteria for the effectiveness of treatment.

Examination of patients with anemic syndrome (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

6.2. Differential diagnosis and treatment of leukemoid reactions, hemoblastoses

Causes of leukemoid reactions. Blood count. Diagnosis and differential diagnosis of leukemoid reactions and hematologic malignancies. Clinical syndromes characteristic of hematologic malignancies, blood count, bone marrow cytology, lymph node cytology, lumbar punctate cytology. Possibilities of immunophenotypic, cytogenetic and molecular genetic methods in the diagnosis of hematologic malignancies. Treatment principles of hematologic malignancies. Prognosis and prevention of hematologic malignancies.

Myelodysplastic syndrome. Classification. Diagnosis. Treatment principles. Prognosis.

Examination of patients with leukemoid reactions, hemoblastosis (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

6.3. Differential diagnosis and treatment of hemorrhagic diatheses

The main types of hemorrhagic diathesis. Differential diagnosis of hemorrhagic diatheses.

Causes of thrombocytopenia and thrombocytopathy. Clinical presentation, diagnostic methods. Treatment depending on the nosological form. Idiopathic

thrombocytopenic purpura. Diagnosis. Treatment principles.

Coagulopathies. Definition. Primary (hereditary) and secondary acquired coagulopathies. Clinical features. Examination of patients with coagulopathy. Strategy of a general practitioner. Prognosis. Prevention.

Vasculopathies. Causes. Clinical presentation. Treatment.

Examination of patients with hemorrhagic diathesis (complaints and history of the disease, physical examination); drawing up an interview plan; interpretation of laboratory and instrumental examination results; making a diagnosis; drawing up a treatment plan, an algorithm for providing emergency medical care, drawing up medical records.

ACADEMIC DISCIPLINE «INTERNAL DISEASES» OF THE SUB-RESIDENCY «GENERAL MEDICAL PRACTICE (FOR FOREIGN CITIZENS)» CURRICULAR CHART

Section, topic #	Section (topic) name	Number of class hours		Supervised student independent work	Literature	Practical skills	Form of control	
		lectures	practical				of practical skills	of current / intermediate assessment
	Lectures	**6**	**-**	**3**				
1.4.	Differential diagnosis and treatment of interstitial lung diseases	1,5	-	-	1, 2, 12			
2.1.	Differential diagnosis of chest pain	1,5	-	-	1, 2, 12			
2.10.	Differential diagnosis of dyspnea and edema syndrome. Differentiated treatment of chronic heart failure	1,5	-	-	1, 2, 12			
4.5.	Differential diagnosis and treatment of osteoporosis	-	-	1,5	1, 2, 12			Interview, test
4.8.	Principles of treatment for systemic connective tissue diseases and systemic vasculitides	1,5	-	-	1, 2, 12			
6.3.	Differential diagnosis and treatment of hemorrhagic diatheses	-	-	1,5	1, 2, 12			Interview, test
	Practical lessons	**-**	**231**	**-**				
1.1.	Differential diagnosis and treatment for bronchial obstruction syndrome	-	7	-	1-3, 6, 7, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan.	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment)*.	Interview, test, solving situational tasks

						Interpretation of spirograms*, chest CT scan. Prescription of treatment	Selecting the dosage form, dose and route of administration when prescribing medications	
1.2.	Differential diagnosis and treatment for pulmonary infiltration syndrome	-	7	-	1, 2, 6, 7, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of spirograms. Interpretation of X-ray picture* and chest CT scan. Interpretation of blood chemistry test. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment) *. Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
1.3.	Differential diagnosis and treatment in the presence of fluid in the pleural cavity, pleural diseases, acute and chronic respiratory failure	-	7	-	1, 2, 6, 7, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of spirograms. Interpretation of X-ray picture and chest CT scan. Interpretation of blood chemistry test. Interpretation of pleural fluid analysis.	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks

						Prescription of treatment		
1.4.	Differential diagnosis and treatment of interstitial lung diseases	-	7	-	1, 2, 6, 7, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of spirograms. Interpretation of X-ray picture and chest CT scan. Interpretation of blood chemistry test. Hemogram interpretation. Interpretation of immunogram. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
1.5.	Differential diagnosis and treatment of suppurative lung diseases. Differentiated antibacterial therapy for lung diseases	-	7	-	1, 2, 6, 7, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of spirograms. Interpretation of X-ray picture and chest CT scan. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks

2.1. 2.2.	Differential diagnosis of chest pain. Diagnosis and treatment of chronic coronary syndromes	-	7	-	1, 2, 5, 7, 10, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. ECG interpretation*. Interpretation of Holter monitoring. Interpretation of blood chemistry test. Prescription of treatment. Controlling an angina attack	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment) *. Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
2.3.	Diagnosis and treatment of acute coronary syndrome without ST-segment elevation.	-	7	-	1, 2, 4, 5, 7, 10-12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. ECG interpretation. Interpretation of Holter monitoring. Interpretation of blood chemistry test. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
2.4.	Differential diagnosis and treatment of myocardial infarction	-	7	-	1, 2, 4, 5, 7, 10-12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal	Performing at the patient's bedside. Solving situational tasks. Solving situational	Interview, test, solving situational tasks

						diseases. Development of an examination plan. ECG interpretation. Interpretation of Holter monitoring. Interpretation of blood chemistry test. Prescription of treatment. Hemogram interpretation	tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	
2.5.	Differential diagnosis and treatment of arterial hypertension	-	7	-	1, 2, 4, 5, 7, 10-12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. ECG interpretation. Interpretation of Holter monitoring. Interpretation of blood chemistry test. Hemogram interpretation. Interpretation of 24-hour blood pressure monitoring. Prescription of treatment. Management of uncomplicated hypertensive crisis	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
2.6.	Differential diagnosis and differentiated treatment of cardiac arrhythmias	-	7	-	1, 2, 4, 5, 7, 10-12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal	Performing at the patient's bedside. Solving situational tasks. Solving situational	Interview, test, solving situational tasks

						diseases. Development of an examination plan. ECG interpretation. Interpretation of Holter monitoring. Interpretation of blood chemistry test. Hemogram interpretation. Prescription of treatment. Management of supraventricular arrhythmias	tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	
2.7.	Differential diagnosis and differentiated treatment of cardiac conduction disorders	-	7	-	1, 2, 4, 5, 7, 10-12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. ECG interpretation. Interpretation of Holter monitoring. Interpretation of blood chemistry test. Hemogram interpretation. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
2.8.	Differential diagnosis of cardiomegaly. Diagnosis and treatment of non-coronary myocardial lesions.	-	7	-	1, 2, 4, 5, 7, 10-12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation	Interview, test, solving situational tasks

						plan. ECG interpretation. Interpretation of Holter monitoring. Interpretation of blood chemistry test. Hemogram interpretation. Prescription of treatment	equipment). Selecting the dosage form, dose and route of administration when prescribing medications	
2.9.	Diagnosis and treatment of endocardial and pericardial lesions	-	7	-	1, 2, 5, 7, 10, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. ECG interpretation. Interpretation of Holter monitoring. Interpretation of blood chemistry test. Hemogram interpretation. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
2.10.	Differential diagnosis of dyspnea and edema syndrome. Differentiated treatment of chronic heart failure	-	7	-	1, 2, 5, 7, 10, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. ECG interpretation. Interpretation of blood chemistry test.	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration	Interview, test, solving situational tasks

						Hemogram interpretation. Prescription of treatment. Providing emergency medical care for anaphylactic shock	when prescribing medications	
3.1.	Differential diagnosis and treatment of diseases of the esophagus	-	7	-	1, 2, 6, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. ECG interpretation. Interpretation of blood chemistry test. Hemogram interpretation. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
3.2.	Differential diagnosis and treatment of gastroduodenal zone diseases	-	7	-	1, 2, 6, 8, 9, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. ECG interpretation. Interpretation of blood chemistry test. Hemogram interpretation. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
3.3.	Differential diagnosis and treatment of chronic hepatitis and liver cirrhosis	-	7	-	1, 2, 6, 8, 12	Patient interview. Physical examination of the patient.	Performing at the patient's bedside. Solving situational	Interview, test, solving situational tasks

						Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. ECG interpretation. Interpretation of blood chemistry test. Hemogram interpretation. Interpretation of ascitic fluid analysis. Interpretation ultrasound examination results of internal organs. Prescription of treatment	tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose route of administration when prescribing medications	
3.4.	Differential diagnosis of jaundice and hepatosplenomegaly	-	7	-	1, 2, 6, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test*. Hemogram interpretation. Interpretation of ascitic fluid analysis. Interpretation of ultrasound examination results of internal organs. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
3.5.	Differential diagnosis and treatment of pancreatic diseases, in abdominal	-	7	-	1, 2, 6, 8,	Patient interview. Physical examination of the	Performing at the patient's bedside.	Interview, test, solving situational

	pain syndrome				12	patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of coprogram, Interpretation of ultrasound examination results of internal organs. Prescription of treatment	Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	tasks
3.6.	Differential diagnosis and treatment of inflammatory bowel diseases, in irritable bowel syndrome	-	7	-	1, 2, 6, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of coprogram. Interpretation of ultrasound examination results of internal organs. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
4.1.	Diagnostic methods for rheumatic diseases. Modern treatment options for rheumatic diseases	-	7	-	1, 2, 5, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment).	Interview, test, solving situational tasks

						chemistry test. Interpretation of immunogram. Interpretation of radiographs. Prescription of treatment	Selecting the dosage form, dose and route of administration when prescribing medications	
4.2.	Differential diagnosis and treatment of rheumatoid arthritis and osteoarthritis	-	7	-	1, 2, 5, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of radiographs. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
4.3.	Differential diagnosis and treatment of spondyloarthritis, arthritis associated with infection and erythema nodosum	-	7	-	1, 2, 5, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of radiographs. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks

4.4. 4.5.	Differential diagnosis and treatment of microcrystalline arthritides. Differential diagnosis and treatment of osteoporosis	-	7	-	1, 2, 5, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of radiographs. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
4.6.	Differential diagnosis of connective tissue systemic diseases. Antiphospholipid syndrome.	-	7	-	1, 2, 5, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of radiographs. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
4.7.	Differential diagnosis of systemic vasculitides	-	7	-	1, 2, 5, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment).	Interview, test, solving situational tasks

						chemistry test. Interpretation of immunogram. Interpretation of radiographs. Prescription of treatment	Selecting the dosage form, dose and route of administration when prescribing medications	
4.8.	Principles of treatment for systemic connective tissue diseases and systemic vasculitides	-	7	-	1, 2, 5, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of radiographs. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
5.1.	Diagnostic capabilities of laboratory and instrumental research methods in nephrology. Differential diagnosis and treatment of tubulointerstitial kidney diseases	-	7	-	1, 2, 6, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of a urinalysis. Interpretation of ultrasound examination results of internal organs. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
5.2.	Differential diagnosis and treatment	-	7	-	1, 2,	Patient interview.	Performing at the	Interview, test,

	of nephritic syndromes Differential diagnosis in nephrotic syndrome, principles of treatment				6, 8, 12	Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of a urinalysis. Interpretation of ultrasound examination results of internal organs. Prescription of treatment	patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	solving situational tasks
5.3.	Renal lesions in diabetes mellitus, systemic connective tissue diseases, systemic vasculitis, gout, multiple myeloma. Differential diagnosis in chronic kidney disease, treatment principles.	-	7	-	1, 2, 6, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of a urinalysis. Interpretation of ultrasound examination results of internal organs. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
6.1.	Differential diagnosis and treatment in anemic syndrome	-	7	-	1, 2, 5, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal	Performing at the patient's bedside. Solving situational tasks. Solving situational	Interview, test, solving situational tasks

						diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of a urinalysis. Interpretation of ultrasound examination results of internal organs. Prescription of treatment	tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	
6.2.	Differential diagnosis and treatment of leukemoid reactions, hemoblastoses	-	7	-	1, 2, 5, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of a urinalysis. Interpretation of ultrasound examination results of internal organs. Prescription of treatment	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage form, dose and route of administration when prescribing medications	Interview, test, solving situational tasks
6.3.	Differential diagnosis and treatment of hemorrhagic diatheses.	-	7	-	1, 2, 5, 8, 12	Patient interview. Physical examination of the patient. Formulation of preliminary and final diagnosis for internal diseases. Development of an examination plan. Hemogram interpretation.	Performing at the patient's bedside. Solving situational tasks. Solving situational tasks (including with the use of simulation equipment). Selecting the dosage	Interview, test, solving situational tasks. Credit*

						Interpretation of blood chemistry test. Interpretation of immunogram. Interpretation of ultrasound examination results of internal organs. Coagulogram interpretation. Prescription of treatment	form, dose and route of administration when prescribing medications	
	Total hours	**6**	**231**	**3**				

*This is a mandatory form of current certification.

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic:

1. Internal diseases : textbook. In 2 Vols. Vol. 1 / ed. by A. I. Martynov, J. D. Kobalava, S. V. Moiseev. – Moskow : Geotar-Media, 2022. – 683 p.
2. Internal diseases : textbook. In 2 Vols. Vol. 2 / ed. by A. I. Martynov, J. D. Kobalava, S. V. Moiseev. – Moskow : Geotar-Media, 2022. – 614 p.

Additional:

3. Arsentieva, I. L. Symptoms, diagnosis, principles of treatment and prevention of bronchial athma and chronic obstructive pulmonary diseases : textbook / I. L. Arsentieva. – Minsk : BSMU, 2024. – 30 p.
4. Samsonova, I. M. Cardiopulmonary resuscitation. Post-resuscitation syndrome : textbook / I. M. Samsonova, L. G. Zakharova. – Vitebsk : VGMU, 2022. – 149 p.
5. Internal medicine : textbook for English-speaking students of higher medical educational esablishment. P. 1 : Cardiology. Rheumatology. Hematology / ed. by M. A. Stanislavchuk, V. K. Sierkova. – Vinnytsya : Nova Knyha, 2019. – 407 p.
6. Internal medicine : textbook for English-speaking students of higher medical educational esablishment. P. 2 : Pulmonology. Gastroenterology. Nephrology. Diseases of the internal organs in countries with hot climate / ed. by . A. Stanislavchuk, V. K. Sierkova. – Vinnytsya : Nova Knyha, 2019. – 359 p.
7. Internal medicine : textbook. In 2 books. Book 1. Diseases of the Cardiovascular and Respiratory Systems / N. M. Seredyuk [et al.]. – Kyiv : AUS Medicine Publishing, 2019. – 663 p.
8. Internal medicine : textbook : in 2 books. Book 2. Diseases of the Digestive System, Kidney, Rheumatic and Hematological Diseases / N. M. Seredyuk [et al.]. – Kyiv : AUS Medicine Publishing, 2020. – 463 p.
9. Sidzenka, V. M Peptic ulcer disease : a study-methodological guide for students of higher educational institutions studying on the English language – Minsk : BSMU, 2019 – 24 p.
10. Clinical electrocardiography : manual for students of higher education institutions studying in the specialty 1-79 01 01 «General Medicine» / V. M. Parochkin, [et. al]. – Grodno : GRSMU, 2019.–200 p.
11. Emergency and urgent medical care : student training manual / O. Y. Bodulev [et. al]; ed. by D. A. Shkurupiy. – Vinnytsia : Nova Knyha, 2019. – 200 p.

Electronic courseware for the academic discipline «Internal Diseases»

12. https://etest.bsmu.by/course/index.php?categoryid=9.

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

The time allocated for independent work can be used by students for:

preparing for lectures, practical classes;

preparing for credit in the academic discipline;

studying the topics (issues) designed for independent work;

preparing presentations.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms of current certification are used to diagnose competencies:
interview
solving situational tasks;
test.

LIST OF AVAILABLE TEACHING METHODS

Traditional method;
active (interactive) methods:
training based on simulation technologies;
Problem-Based Learning (PBL);
Team-Based Learning (TBL);
Case-Based Learning (CBL);
Research-Based Learning (RBL).

LIST OF PRACTICAL SKILLS

Name of practical skill	Form of practical skill control
1. Patient interview	Performing at the patient's bedside
2. Physical examination of the patient	Performing at the patient's bedside
3. Interpretation of radiographs (X-ray picture) and CT scan	Solving situational tasks (including using simulation equipment)
4. Interpretation of spirograms	Solving situational tasks
5. ECG interpretation	Solving situational tasks (including using simulation equipment)
6. Interpretation of Holter monitoring	Solving situational tasks
7. Interpretation of 24-hour blood pressure monitoring (ABPM)	Solving situational tasks
8. Interpretation of ultrasound examination results of internal organs	Solving situational tasks
9. Hemogram interpretation	Solving situational tasks (including using simulation equipment)
10. Interpretation of a urinalysis	Solving situational tasks (including using simulation equipment)
11. Coagulogram interpretation	Solving situational tasks (including using simulation equipment)
12. Interpretation of blood chemistry test	Solving situational tasks (including using simulation equipment)
13. Interpretation of pleural fluid analysis	Solving situational tasks
14. Interpretation of ascitic fluid analysis	Solving situational tasks
15. Interpretation of immunogram	Solving situational tasks
16. Interpretation of coprogram	Solving situational tasks

Name of practical skill	Form of practical skill control
17. Management of uncomplicated hypertensive crisis	Solving situational tasks
18. Controlling an angina attack	Solving situational tasks
19. Management of supraventricular arrhythmias	Solving situational tasks
20. Providing emergency medical care for anaphylactic shock	Solving situational tasks using simulation equipment
21. Formulation of preliminary and final diagnosis for internal diseases	Solving situational tasks
22. Development of an examination plan	Solving situational tasks
23. Prescription of treatment	Selecting the dosage form dose and route of administration when prescribing medications

LIST OF STATION PASSPORTS FOR THE OBJECTIVE STRUCTURED CLINICAL EXAMINATION USED FOR STUDENT ASSESSMENT

1. Interpretation of the results of complete blood count (approval date: 02.03.2026).

2. Electrocardiography: interpretation of test results (approval date: 02.03.2026).

3. Interpretation of the results of a general clinical urine test (approval date: 02.03.2026).

LIST OF SIMULATION EQUIPMENT USED

1. Screen-based patient simulator (SbPS).

2. Patient Mannequin.

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 #)
Internal Diseases	Department of Internal Medicine, Gastroenterology and Nutrition with training and advanced training courses	No suggestions	Protocol # 15 of 17.04.2026
Outpatient Therapy	Outpatient Therapy	No suggestions	Protocol # 15 of 17.04.2026

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

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