MINISTRY OF HIGHER EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION PENZA STATE UNIVERSITY MEDICAL INSTITUTE

APPROVED

Director of the Institute

A. N. Mitroshin

2016

STUDY PROGRAM OF THE DISCIPLINE C 1.1.36 Intermediate Level Therapy, Occupational Diseases

Specialty: 31.05.01 General Medicine Graduate's qualification – Medical doctor

Mode of study: full-time

1. Goal of the discipline

The goal of the discipline Intermediate Level Therapy, Occupational Diseases is: developing students' competences in main symptoms and syndromes of the most common nosological forms of diseases in their classical (typical) course, modern methods of their diagnosis, treatment (with mandatory knowledge of international names of essential medicines, methods of their introduction, dosages depending on age) and the principles of prevention.

The objectives of the discipline Intermediate Level Therapy, Occupational Diseases are: studying etiology and pathogenesis, typical clinical manifestations and course of the most common nosological forms of diseases; exploring modern methods of diagnosis, treatment and prevention of common forms of diseases; recognizing the main symptoms and symptom complexes of the most common nosological forms of diseases; determining the standard methods of examination aimed at verifying the diagnosis; conducting differential diagnosis in group of diseases with similar symptoms and preliminary diagnosis, identifying the scope of additional studies to clarify the diagnosis; formulating clinical diagnosis according to modern classification; preparing treatment plan taking into account the course of the disease, appointing drug therapy, using methods of non-drug treatment, rehabilitation.

2. Place of the discipline in BPEP structure

The discipline Intermediate Level Therapy, Occupational Diseases refers to the basic part of the C1 block.

Intermediate Level Therapy, Occupational Diseases is interconnected with the following disciplines: Anatomy; Biology; Biochemistry; Histology, Embryology, Cytology; Normal Physiology; Propaedeutics of Internal Diseases, Radiation Diagnosis; Public health and health care, Health Economics; Pharmacology.

The main topics of the discipline are necessary for studying the clinical disciplines: Polyclinic Therapy; Hospital Therapy, Endocrinology; Infectious Diseases; Neurology, Medical Genetics; Phthisiology; Clinical Hematology; Oncology, Radiation Therapy; Anesthesiology, Resuscitation, Intensive Care.

3. Students' competences acquired through successful completion of the discipline Intermediate Level Therapy, Occupational Diseases

The process of studying the discipline is aimed at forming the components of the following competences in accordance with Federal State Educational Standards of Higher Education (hereinafter – FSES HE) in this field of study:

Code of the competence	Name of the competence	Components of the competence (On successful completion of the course, the student should know, be able to, obtain and apply)
1	2	3
GC-1	ability to abstract thinking,	Know: methods of analysis and synthesis
	analysis, synthesis	Be able to: apply methods of analysis and
		synthesis
		Obtain and apply: ability to apply methods
		of analysis and synthesis
1	2	3
GC-8	willingness to work in a	Know: social, ethnic, religious and cultural
	team, to tolerate social,	differences

	ethnic, religious and cultural differences	Be able to: tolerate social, ethnic, religious and cultural differences Obtain and apply: ability to work in a team
PC-1	ability and readiness to implement a set of measures aimed at maintaining and improving health, including a healthy lifestyle, preventing the	Know: set of measures aimed at maintaining and improving health, including a healthy lifestyle, preventing the occurrence and (or) spread of diseases.
	occurrence and (or) spread of diseases, diagnosing them at early stages, identifying the causes and conditions for their occurrence and development, as well as eliminating harmful effects	Be able to: implement a set of measures aimed at maintaining and improving health, preventing the occurrence and (or) spread of diseases, make early diagnosis and identify the causes and conditions of emerging and developing diseases under the guidance of a teacher.
	of environmental factors on human health	Obtain and apply: skills to independently implement a set of measures aimed at maintaining and improving health, including a healthy lifestyle, preventing the occurrence and (or) spread of diseases, diagnosing them at early stages, identifying the causes and conditions for their occurrence and development, as well as eliminating harmful effects of environmental factors on human health
PC-5	readiness to collect and analyze patient complaints, his/her medical history, examination results, laboratory, instrumental, pathological and other studies in order to recognize the condition or establish the presence or absence of a disease	Know: complaints, data of examination, laboratory, instrumental, pathological-anatomical and other studies in various diseases of the internal organs. Be able to: collect complaints, anamnesis of the patient in order to recognize the condition or establish the presence or absence of the disease. Obtain and apply: skills in analyzing complaints, anamnesis, examination results, laboratory, instrumental, pathological and anatomical and other studies to recognize the condition or
PC-6	ability to determine the patient's main pathological conditions, symptoms, syndromes of diseases, nosological forms in according with the International statistical	establish the presence or absence of disease Know: basic pathological conditions, symptoms, syndromes of diseases, nosological forms in accordance with International statistical classification of diseases
	classification of diseases, 10 th revision	Be able to: identify under the guidance of teacher basic pathological conditions, symptoms, syndromes of diseases, nosological forms in accordance with

		International statistical classification of diseases
		Obtain and apply: skills of determining the main pathological conditions, symptoms, syndromes of diseases, nosological forms in accordance with the international statistical classification of diseases
PC-17	ability to apply the basic principles of organization and management in the field of public health, in medical organizations and their structural subdivisions	Know: basic principles of organization and management in the field of public health, in medical organizations and their structural subdivision Be able to: under the guidance of the teacher apply the basic principles of organization and management in the field of public health, in medical organizations and their structural subdivisions Obtain and apply: ability to independently
		apply the basic principles of organization and management in the field of public health, in medical organizations and their structural subdivisions
PC-20	readiness for analysis and public presentation of medical information following evidence-based medicine	Know: methods, ways of analysis and public presentation of medical information following evidence-based medicine
		Be able to: participate in analysis and public provision of medical information Obtain and apply: ability to independently analyze, publicly present medical information following evidence-based medicine

4. Structure and content of the discipline Intermediate Level Therapy, Occupational Diseases

4.1. Structure of the discipline

The total workload of the discipline is 10 credits, 360 hours.

			Тур		academic			_			lual	Fo	orms (of on-g	oing perf top	forma	nce asse	ssment (эу
				In-cla	ass work			Individ	ual wo	ork							her		
Name of the discipline (module) units and topics	Semester	Semester weeks	Total	Lecture	Practical classes	Laboratory work	Total	Preparation for in-class work	Papers, essays etc.	Coursework (project)	Preparation for exams	Interview	Spoken test	Test	Check work marking	Paper marking	Marking of essays and other creative works	Coursework (project)	Skills testing
Section 1. Diseases of the	7			4	24		26	24		2									7
respiratory system																			
Topic 1.1. Pneumonias	7			2	6		7	6		1		1		1	1		1	1	7
Topic 1.2. Suppurative lung disease	7				6		6	6				2		2	2			2	7
Topic 1.3. Bronchiectasis	7				6		6	6				3		3	3			3	7
Topic 1.4. Bronchial asthma	7			2	6		7	6		1		4		4	4		4	4	7
Section 2. Diseases of the circulatory system	7				36		40	34		6									7
Topic 2.1. Arterial hypertension				2	6		7	6		1		5		5	5		5	5	
Topic 2.2. Atherosclerosis. Stable	7			2	6		6	5		1		6		6	6		6	6	7

Angina Pectoris												
Topic 2.3. Acute coronary	7		6	7	6	1	7	7	7	7	7	7
syndrome												
Topic 2.4. Myocardial	7	2	6	7	6	1	8	8	8	8	8	7
infarction												
Topic 2.5 Heart	7	2	6	6	5	1	9	9	9	9	9	7
arrhythmias and blockage												
Topic 2.6. Chronic heart	7	2	6	7	6	1	10	10	10	10	10	
failure												
Section 3. Kidney and			<i>12</i>	<i>12</i>	10	2						
urinary tract diseases												
Topic 3.1. Acute	7		6	6	5	1	11	11	11	11	11	7
glomerulonephritis												
Topic 3.2. Chronic		2	6	6	5	1	12	12	12	12	12	
glomerulonephritis												
Section 4. Occupational			22	24	24					6		
diseases												
Topic 4.1. Occupational			6	6	6		13	13		7	13	
pathology as a clinical												
discipline. Occupational												
diseases of healthcare												
workers												
Topic 4.2. Occupational			6	6	6		14	14		8	14	
diseases of the respiratory												
system of chemical												
etiology. Pneumoconiosis.												
Topic 4.3. Vibration		2	5	6	6		15	15		9	15	
disease												
Topic 4.4. Acute and	7	1	6	6	6		16	16			16	7
chronic poisoning by												
pesticides, heavy metal												
compounds												
Semester total	7		95	10	92	<i>10</i>						7

			2							
Section 1. Diseases of the	8	12	2	2						8
respiratory system										
Topic 1.1. Chronic	8	6	1	1		1	1	1	1	8
bronchitis										
Topic 1.2. COPD	8	6	1	1		2	2	2	2	8
Section 2. Diseases of the	8	24	6	6						8
circulatory system										
Topic 2.1 Acute	8	6	1	1		3	3	3	3	8
rheumatic fever										
Topic 2.2. Infective	8	6	1	1		4	4	4	4	8
endocarditis										
Topic 2.3. Mitral heart	8	6	1	1		5	5	5	5	8
disease										
Topic 2.4. Aortic heart	8	6	1	1		6	6	6	6	8
disease										
Section 3. Diseases of the	8	22	2	2						
digestive system										
Topic 3.1. Diseases of the	8	6	0,5	0,5		7	7	7	7	8
esophagus										
Topic 3.2. Chronic	8	6	0,5	0,5		8	8	8	8	8
gastritis										
Topic 3.3. Gastric ulcer	8	6	0,5	0,5		9	9	9	9	8
and duodenal ulcer										
Topic 3.4. Bowel disease	8	4	0,5	0,5		10	10	10	10	8
Section 4. Diseases of	8	22	4	4						8
liver, biliary tract and										
pancreas										
Topic 4.1. Diseases of the	8	6	1	1		11	11	11	11	8
biliary tract										
Topic 4.2. Chronic	8	6	1	1		12	12	12	12	8
hepatitis										
Topic 4.3. Cirrhosis	8	6	1	1		13	13	13	13	8

Topic 4.4. Chronic	8		4	1	1			14		14	14			14	8
pancreatitis															
Semester total			80	12	12										
Course work (project)	7					10									7
Preparation for exam	8						36								8
Total workload, in											Interim a	ssess	ment		
academic hours							26	Type				Se	emester		
							36	Pass-	fail e	xam		8			
								Exan	1						

^{*}Classes are conducted on a cyclic schedule

4.2. Content of the discipline (module)

Section of the discipline	No	Topic	Content
		7th semester	1
Disorders of the Respiratory System	1	Pneumonias	Etiology (bacterial, viral, rickettsiosis, chemical and physical stimuli, allergic) pneumonia. Pathogenesis: influence of alcohol, cooling, injuries, operations, pathology of the nasopharynx and previous bronchial damage. Value of immunological reactions of the body. Modern classification. Treatment. Identification of the pathogen as an important stage in formulating detailed clinical diagnosis and choosing etiological therapy. Diet. Antibacterial therapy. Antiviral drug. Symptomatic means increasing body's resistance. Immune stimulants. Desensitizing therapy. Physiotherapy, therapeutic breathing exercises. Criteria of recovery. Outcomes of the disease. Disease prognosis
	2	Suppurative lung disease	Lung abscess and gangrene. Etiology and pathogenesis (post-pneumonic, aspiration, hematogenic-embolic and traumatic suppuration of the lungs). Clinical manifestations, their peculiarity depending on the stage, localization and prevalence, severity of the course. Complications. Treatment: sanation of the bronchial tree: fiber-optic bronchoscopy, segmental catheterization, transthoracic microgranuloma, microstereoscope, antibacterial therapy, intratracheal administration of antibiotics, antiseptics and other drugs, restorative therapy. Symptomatic means. Primary and secondary prevention. Indications for surgical treatment.
	3	Bronchiectasis	Definition, etiology, pathogenesis, classification; clinical picture, diagnosis; treatment
	4	Bronchial asthma	Etiology and pathogenesis of bronchial asthma (BA). Role of Exo-and endo allergens, hereditary-constitutional and professional factors, focal infection of the upper respiratory tract and bronchi, the state of the Central and autonomic nervous system. Role of autoimmunization. Classification. Mechanism of attack. Clinical symptomatology of Exo and endogenous bronchial asthma. Diagnostic criteria of bronchial asthma (basic and additional). Role of allergic examination. Differential diagnosis. Complications. Asthmatic status, predisposing factors. Criteria for diagnosis and stage of course. Treatment. Arresting of attack. Fight against asthmatic status and its prevention. Glucocorticoids, lavage of the bronchial tree. Bronchodilators (sympathomimetics, cholinolytics, purine bases), Intal, immunosuppressants. Treatment in the interventional period (sanation of foci of infection, cessation of contact with the allergen, specific and nonspecific hyposensitization). Sanation of foci of infection. Spa treatment. Prevention. Forecast. Employment opportunity.
Diseases of the circulatory system	5	Arterial hypertension	Spread of arterial hypertension (AH). Etiology and pathogenesis. Role of central disorders of regulation of blood pressure, sympathetic nervous system, humoral and hormonal pressor (renin angiotensin, aldosterone) and depressor (kinin, prostaglandin) factors in the onset and

		1
6	Atherosclerosis.	progression of the disease. Value of sodium metabolism disorders, and other risk factors. Classification. Clinical picture of various stages of the disease. Hemodynamic options. Complications. Differential diagnosis of symptomatic arterial hypertension. Treatment. Regimen, rational nutrition and other non-drug methods. Differential use of antihypertensive drugs with different mechanisms of action, hemodynamic changes and associated diseases. Principles of combined pharmacotherapy. Outcomes. Disease prognosis. Medical-Labour Examination and employment opportunity. Prevention (control of risk factors, medical examination). Epidemiology of atherosclerosis. Pathogenesis.
	Stable Angina Pectoris	Risk factor. Atherosclerosis and hypertension. Most frequent localization of atherosclerosis. Features of clinical manifestations. Importance of laboratory, radiological, instrumental and angiographic study methods in the diagnosis of atherosclerosis of various localizations. Main groups of drugs in the treatment of atherosclerosis. Primary and secondary prevention. Importance of work and life factors, physical education and physical activity, rational nutrition. Ischemic heart disease (IHD): Stable Angina Pectoris. Concept of IHD. Relevance of the problem (social significance, epidemiology). IHD risk factors, their significance. Classification of IHD. Stable Angina Pectoris. Pathogenesis of pain syndrome (role of functional and anatomical factors). Clinical options: stable, unstable (first-time, progressive, variant). Severity. Diagnosis. Characteristics of pain, risk factors. Role of ECG in the detection of coronary insufficiency (ECG with pharmacological and load tests). Radionuclide methods. Role of invasive techniques (coronary angiography, frequent atrial stimulation test). Differential diagnosis with small-focal myocardial infarction. Treatment of coronary artery disease. Non-drug methods. Relief and prevention of pain attacks (nitrates, beta-blockers, calcium antagonists). Principles of step therapy. Place of physical training in complex treatment. Indications for surgical treatment. Prevention (primary and secondary).
7	Acute coronary	Disease prognosis. Employment expertise. Concept of acute coronary syndrome (ACS), etiology, pathogenesis of ACS. Clinical forms,
	syndrome	features of tactics and treatment of patients with ACS. Diagnosis of ACS. Treatment.
8	Myocardial infarction	Epidemiology of myocardial infarction. Pathogenesis. Clinical picture in different periods of the disease uncomplicated myocardial infarction. Clinical variants of the onset of the disease. Diagnosis. Changes in electrocardiogram, blood pattern, biochemical parameters. Treatment of uncomplicated myocardial infarction. Importance of early hospitalization. Pre-hospital care. Medical tactics in different periods of myocardial infarction. Relief of pain attack, fight against cardiogenic shock, heart failure, rhythm disturbances. Possibilities of anticoagulant and thrombolytic therapy. Principles of resuscitation of patients with myocardial infarction in sudden clinical death. Forecast. Rehabilitation of patients. Labor examination and employment. Prophylactic

		medical examination. Complications: cardiogenic
		shock, rhythm and conduction disorders, heart failure, early and late heart aneurysms, cardiac
		tamponade, post-infarction syndrome. Treatment of complicated myocardial infarction. Importance
		of early hospitalization. Pre-hospital care.
		Medical tactics in various complications of myocardial infarction.
9	Heart arrhythmias and	Sinus node weakness syndrome. Diagnosis. Clinical implications. Indications for implantation
	blockage	of artificial pacemaker. Conduction disturbance.
		Pathogenesis. Classification. Blockades sinoatrial, atrioventricular, intraventricular. Blockade of legs
		of bundle branch block. Etiology, clinical
		picture, diagnosis, treatment. Clinical implications. Nature of ECG changes. Changes in
		hemodynamics in various conduction disorders.
		Complications (Morgana-Adams-Stokes syndrome, heart failure, arrhythmias). Diagnosis
		and differential diagnosis. Role of
		electrophysiological studies and ECG monitor. Treatment. Medical tactics in acute conduction
		disorders. Indications for temporary pacing.
		Therapy of chronic conduction disorders. Indications for pacemaker implantation. Medical-
		Labour Examination. Forecast. Modern ideas
		about the pathogenesis of arrhythmia. Classification of arrhythmias. Extrasystole.
		Pathogenesis. Clinical implications.
		Extracytoplasmic topical diagnosis of arrhythmias (ECG signs). Features of medical tactics,
		indications for the appointment of antiarrhythmic
		drugs. Prevention of arrythmia. Paroxysmal tachycardia. Pathogenesis. Clinical picture of an
		attack of paroxysmal tachycardia. ECG changes.
		Changes in systemic hemodynamics during an attack. Drug therapy during an attack of
		paroxysmal tachycardia, supraventricular and
		ventricular. Indications for pulse therapy. Prevention of seizures. Forecast. Syndrome of
		premature ventricular excitation. Diagnosis.
		Indications for surgical treatment. Atrial fibrillation and atrial flutter. Pathogenesis.
		Classification. Clinical symptomatology. ECG
		changes. Effect of atrial fibrillation on hemodynamics. Complications. Therapy of
		paroxysmal and permanent atrial fibrillation.
		Indications for pulse therapy. Management of patients after restoration of rhythm. Prevention of
		recurrent atrial fibrillation. Medical-Labour
		Examination. Disease prognosis. Ventricular fibrillation. Pathogenesis. Clinical picture, ECG
		signs. Therapy. Role of intensive care units in the
		prevention, diagnosis and therapy of ventricular fibrillation.
10	Chronic heart failure	Modern ideas about the pathogenesis of heart
		failure. Features of changes in myocardial metabolism in heart failure. Nature of
		hemodynamic changes (systemic and regional) in
		heart failure. Role of kidneys and endocrine factors in the occurrence of water-electrolyte
		balance disorders. Provoking and contributing
		factors. Classification of heart failure. Clinical manifestations of acute and chronic heart failure,
		left and right ventricular. Concept of" hidden"
		heart failure. Diagnosis of heart failure. Clinical and additional research methods. Therapy. Mode.
		Diet. Features of medical tactics taking into
		account the main pathological process and the

			stage of heart failure. Indications and contraindications to the use of cardiac glycosides. Tactics of long - term use of glycosides. Diuretics in the treatment of heart failure. Possible peripheral vasodilators and ACE inhibitors. Emergency care for heart asthma and pulmonary edema. Indications and contraindications to Spa treatment. Medical and labor examination and prognosis.
Disorders of the Kidney and Urinary Tract	11-12	Acute glomerulonephritis Chronic glomerulonephritis	Anatomy and physiology of the kidneys. Glomerulonephritis: definition. Etiology and pathogenesis (immunocomplex, antibody mechanisms) of acute and chronic glomerulonephritis. Classification of glomerulonephritis (primary, secondary). Clinical classification of glomerulonephritis (Tareeva, 1972). Morphological classification of glomerulonephritis. Leading nephrological syndromes and their pathogenesis (urinary, nephrotic, acute nephritic, hypertensive, acute renal injury, chronic kidney disease, tubular dysfunction). Clinical manifestations of glomerulonephritis. Types of proteinuria, hematuria. Pathogenesis of nephrotic syndrome (NS). Mechanism of primary sodium retention in NS. Signs of hypovolemic and hypervolemic variants of NS. NS complications (nephrotic crisis, thrombosis, acute renal injury, metabolic disorders, anemia, etc.). Diagnosis of glomerulonephritis. Differential diagnosis. Indications for renal biopsy. Treatment of glomerulonephritis (etiotropic, pathogenetic). Treatment of NS, nephrotic crisis, edema in NS. Treatment of thrombosis in NS. Clinical examination of glomerulonephritis. Disease prognosis.
Occupational disease	13	Occupational pathology as a clinical discipline. Occupational diseases of healthcare workers	Definition of occupational diseases. Main objectives of the occupational pathology. Concept of "harmful production factor". Classification of "harmful production factor". Background of development of occupational pathology. Peculiarities of clinical examination and diagnostics of occupational diseases. Organization and conduct of medical examination of workers. Preliminary medical examinations. Periodical medical examinations. Order of medical examinations. Occupational diseases of healthcare workers
	14	Occupational diseases of the respiratory system of chemical etiology. Pneumoconiosis.	Occupational diseases of the respiratory system from exposure to industrial aerosols. Pneumoconiosises. Differential diagnosis of pulmonary dissemination.
	15	Vibration disease	Definition of vibration disease. Pathogenesis. Clinics. Vibration disease in the result of local vibration. Vibration disease caused by the impact of general vibration. Classification. Vibration disease caused by combined affection of general and local vibration. Treatment. Verification of the ability to work. Preventive measures.
	16	Acute and chronic poisoning by pesticides, heavy metal compounds 8th semester	Industrial intoxication (poisoning) inorganic and organic substances and their compounds. Pesticide intoxication. Antidote therapy.

Disorders of the Respiratory System	1	Chronic bronchitis	Etiology and pathogenesis of chronic bronchitis. Effect of smoking, infections, cool, professional, and endocrine factors. Classification of chronic bronchitis. Clinical picture depending on the form, stage and phase of the process. Course and complications. Diagnostic criteria of the disease. Emphysema. Treatment (antibacterial, broncholytic, mucolytic and antitussive therapy). Physiotherapy and exercise therapy. Prevention. Upper respiratory tract sanitation. Forecast. Employment expertise and employment.
	2	COPD	Definition of COPD. Etiology and pathogenesis of COPD. Factors that provoke exacerbation of the disease. Clinical manifestations of stable COPD and during exacerbation. COPD phenotypes. Classification of COPD by severity. Methods of diagnosis of COPD. Differential diagnosis of COPD. Principles of treatment of COPD according to the ABCD groups. Principles of treatment and prevention of COPD exacerbations.
Diseases of the circulatory system	3	Acute rheumatic fever	Etiology. Role of beta-hemolytic Streptococcus (clinical, serological and epidemiological evidence). Pathogenesis of rheumatism. Morphology of the various stages of rheumatism. Classification. Clinical picture of the main manifestations of rheumatism: polyarthritis, rheumocarditis, primary and recurrent, pericarditis, chorea, skin manifestations, kidney damage. Clinical and laboratory criteria of rheumatism activity. Variants of the course of rheumatism. Differential diagnosis. Treatment of rheumatism: penicillin therapy, non-steroidal anti-inflammatory drugs. Indications for corticosteroids. Prevention. Sanitation of focal infection, anti-relapse treatment.
	4	Infective endocarditis	Etiology, pathogenesis. Value of the reactivity of the organism and the characteristics of the pathogen in the occurrence of infectious endocarditis. Features of acute and prolonged septic endocarditis. Clinics: variants of the onset of the disease, temperature curve, damage to the heart and other organs (kidneys, liver and spleen, skin, etc.). Thromboembolic complications. Laboratory data, value of repeated blood cultures to identify the causative agent of the process. Clinical "masks" of the disease. Features of the course in the elderly and senile age, drug addicts, after heart surgery. Treatment: choice of antibiotic, need for high doses, duration of therapy, indications for surgical treatment. Criteria of curability. Prevention of exacerbation. Prophylactic medical examination.
	5	Mitral heart disease	Mitral regurgitation. Etiology, pathogenesis of hemodynamic disorders. Clinical picture. Stages of mitral regurgitation. Diagnosis. Forecast. Treatment. Indications for surgical treatment. Mitral stenosis. Etiology. Pathogenesis of hemodynamic disorders. Clinical picture. Stages of mitral stenosis. Value of instrumental data (ECG, ultrasound, radiography) in the diagnosis. Causes of decompensation. Complications. Disease prognosis. Treatment. Indications for surgical treatment. Prophylactic medical examination. Combined mitral heart disease. Identification of predominance of stenosis or regurgitation.

	6	Aortic heart disease	Aortic regurgitation. Etiology. Pathogenesis of hemodynamic disorders. Clinical picture. Instrumental methods of research. Current. Complications. Forecast. Possibilities of surgical treatment. Aortic stenosis. Etiology. Pathogenesis of hemodynamic disorders. Clinical picture. Current. Stages. Diagnosis. Complications. Disease prognosis. Indications for surgical treatment.
Diseases of the digestive system	7	Diseases of the esophagus	Esophageal achalasia. Hiatal hernia. Gastroesophageal reflux disease. Etiology, pathogenesis, clinical picture, instrumental methods of diagnosis. Treatment. Disease prognosis. Prevention.
	8	Chronic gastritis	Definition. Etiology. Mechanisms of damage to the gastric mucosa in HP infection. Modern classification of chronic gastritis. Formulation of the diagnosis. Clinical picture. Main syndromes (connection with the secretory function of the stomach). Diagnosis. Value of x-ray, endoscopic studies, possibility of gastrobiopsy. Invasive and non-invasive methods for diagnosing HP infection. Assessment of gastric secretory function (intragastric PH-metry). Possible complication. Indications for hospitalization. Treatment depending on etiological factors, state of secretory function of the stomach, stage (exacerbation, remission); diet, drug therapy. Schemes of antihelicobacter therapy. Principles of prescription of antacid drugs. Gastroprotectia. Current. Forecast. Prophylactic medical examination.
	9	Gastric ulcer and duodenal ulcer	Etiology. Basic and predisposing factors. Multifactoriality pathogenesis. Clinics, dependence on the location of the ulcer. Diagnosis. Value of anamnesis, physical and laboratory-instrumental examination, x-ray and endoscopic methods. Detection of violations of secretory and motor functions of the stomach. Features of the course of gastric ulcer and duodenal ulcer. Complications: perforation, bleeding, penetration, stenosis of the pylorus, or duodenum, perigastritis, periduodenitis. Special forms of peptic ulcer (ulcers of the pyloric canal, post-bulbar ulcers, multiple, giant ulcers, juvenile and ulcers in the elderly). Differential diagnosis (primary ulcerative form of gastric cancer, symptomatic ulcers). Treatment. Features diet. Treatment. Absolute and relative indications for surgical treatment.
	10	Bowel disease	Celiac disease. Definition, etiopathogenesis, classification, clinical picture, functional morphology of the small intestine, diagnosis, treatment. Irritable bowel syndrome, definition, etiology, pathogenesis, clinical picture, Bristol stool shape scale, diagnosis, differential diagnosis, treatment, prognosis.
Diseases of the liver, biliary tract and pancreas	11	Diseases of the biliary tract	Chronic cholecystitis and cholangitis: Etiology and pathogenesis. Significance of infection, motor disorders, cholelithiasis. Clinical picture. Diagnosis and its criteria. Possibilities of instrumental diagnostics. Complications. Treatment. Diet. Drug therapy in the period of exacerbation. Indications and contraindications to Spa treatment. Forecast. Gallstone disease: Etiology. Pathogenesis. Predisposing factor. Significance gender, age, nutrition, violations exchange. Local factor. Types of gallstones. Clinical picture. Main clinical syndromes. Painful

		and dyspeptic forms. Biliary colic. Diagnosis. Importance of ultrasound and x-ray examination. Complications. Treatment. Indications and contraindications for surgical treatment. Conservative therapy. Seizure relief. Treatment with oral solvents. Lithotripsy. Forecast. Prevention. Oddi sphincter dysfunction: Definition. Etiology and pathogenesis. Clinical implications. Clinical and instrumental laboratory diagnostics. Treatment.
12	Chronic hepatitis	Etiology (viral infection, alcohol, industrial hazards, various medicines). Pathogenesis. Role of virus persistence and immunological disorders. Morphology. Features of the flow of different forms. Clinical and laboratory (inflammation, cytolysis, cholestasis, cell failure) syndromes. Diagnosis, the value of puncture liver biopsy, ultrasound, radionuclide and immunological methods. Differential diagnosis with fatty liver dystrophy, benign hyperbilirubinemia. Course and outcomes of the disease. Indications for use of corticosteroids and immunosuppressive drugs, antiviral drugs.
13	Cirrhosis	Definition. Etiology (infectious, effect of alcohol and toxic substances, etc.). Pathogenesis. Role of immunological disorders. Classification. Clinical and morphological forms of the disease. Clinical picture. Main clinical syndromes. Current. Severity classes of cirrhosis according to child-Pugh. Possibilities of clinical, laboratory and instrumental diagnostics. Diagnostic criterion. Features of clinics. Complications of cirrhosis: cirrhosis-cancer, hepatic coma, bleeding, anemia, hypersplenism, edema-ascitic syndrome. Treatment of cirrhosis. Diet. Drugs and indications for the use of immunosuppressive drugs, hepatoprotectors. Treatment of complications. Prevention. Examination of working capacity.
14	Chronic pancreatitis	Definition. Etiology and pathogenesis. Classification. Primary and secondary pancreatitis. Clinical picture. Role of pancreatic function research and instrumental methods of research. Formulation of the diagnosis. Differential diagnosis with pancreatic cancer. Treatment. Diet depending on the form and stage of the disease. Treatment in the acute phase. Treatment in remission. Indications for surgical treatment. Disease prognosis.

5. Educational technology

Traditional classes are combined with the analysis of patient and his/her medical history according to the topics of the discipline:

- Testing
- Multimedia lectures
- Solving case tasks
- Writing prescriptions for various forms of drugs and solving tasks for pharmacotherapy of specific pathological conditions
- Coursework
- Independent work with literature
- Supervising patients in the departments of the therapeutic hospital.

In order to implement an individual approach to teaching students undergoing special learning process within the framework of an individual work plan, the study of this discipline is based on the following possibilities: providing out-of-class work with students including in the electronic educational environment using appropriate software equipment, forms of distance learning, possibilities of Internet resources, and individual consultations.

5.1. Active learning methods

Method of analyzing specific situations (role-playing games)

Role-playing games are an innovative method of working with students, which is aimed at stimulating independent and creative activity of students. In the course of the game, it is possible to thoroughly analyze all possible nuances of the problem, to determine students training level. Role-playing games are of instructive and supervising nature and are held during practical classes in the main sections of the discipline. Before the game starts, its tasks are read out (clinical medical history).

The lecturer suggests students to take part in the game, if no one wishes, the participants are chosen by the lecturer. The reviewers of the participants are appointed only by the lecturer from among the most successful students. The results of the game are summed up. The correctness of actions within the task, timeliness of reaction, and level of knowledge are taken into account.

7th semester

- 1. Pneumonias.
- 2. Arterial hypertension.

8th semester

- 1. Infective endocarditis.
- 2. Chronic hepatitis.

Method of solving case tasks

Solving case tasks in all sections of the discipline.

7th semester

Respiratory diseases.

Diseases of the circulatory system.

8th semester
Diseases of the digestive system.
Diseases of the circulatory system.

6. Teaching and methodological support of students' individual work. Forms of current and interim assessment.

6.1. Plan of students' individual work

№	Торіс	Type of individual work	Task	Recommended literature	Amount of hours
1.	Pneumonias	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	6
2.	Suppurative lung disease	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015.	6

				5. On Rounds: 1000 Internal Medicine Pearls 1st Edition , 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	
3.	Bronchiectasis	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth , 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition , 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	6
4.	Bronchial asthma	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	6
5.	Arterial hypertension	Preparing	To study theoretical material on	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by <u>J. Larry Jameson</u> (Author), <u>Anthony S. Fauci</u>	6

		for in-class work	the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	(Author), <u>Dennis L. Kasper</u> (Author), <u>Stephen L. Hauser</u> (Author), <u>Dan L. Longo</u> (Author), <u>Joseph Loscalzo</u> (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by <u>Steven S. Agabegi</u> (Author), <u>Elizabeth D. Agebegi</u> (Author), 2015	
6.	Atherosclerosis. Stable Angina Pectoris	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	5
7.	Acute coronary syndrome	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by <u>J. Larry Jameson</u> (Author), <u>Anthony S. Fauci</u> (Author), <u>Dennis L. Kasper</u> (Author), <u>Stephen L. Hauser</u> (Author), <u>Dan L. Longo</u> (Author), <u>Joseph Loscalzo</u> (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018.	6

				3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	
8.	Myocardial infarction	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Editionby Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	6
9.	Heart arrhythmias and blockage	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Editionby Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015.	5

				6. Step-Up to Medicine (Step-Up Series) 4th Edition by <u>Steven S.</u> <u>Agabegi</u> (Author), <u>Elizabeth D. Agebegi</u> (Author), 2015	
10.	Chronic heart failure	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	6
11.	Acute glomerulonephritis	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	5
12.	Chronic glomerulonephritis	Preparing for in-class	To study theoretical material on the topic of the class. To revise	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by <u>J. Larry Jameson</u> (Author), <u>Anthony S. Fauci</u> (Author), <u>Dennis L. Kasper</u> (Author), <u>Stephen L. Hauser</u> (Author), <u>Dan</u>	5

		work	methods for diagnosing internal organs. To answer questions for self-control	L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	
13.	Occupational pathology as a clinical discipline. Occupational diseases of healthcare workers	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	6
14.	Occupational diseases of the respiratory system of chemical etiology. Pneumoconiosis.	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy	6

				M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	
15.	Vibration disease	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	6
16.	Acute and chronic poisoning by pesticides, heavy metal compounds	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S.	6

				Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	
1.	Chronic bronchitis	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	1
2.	COPD	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	1
3.	Acute rheumatic fever	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan	1

			organs. To answer questions for self-control	L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	
4.	Infective endocarditis	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	1
5.	Mitral heart disease	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy	1

				M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	
6.	Aortic heart disease	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	1
7.	Diseases of the esophagus	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	 Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Editionby Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. 	0,5

				Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	
8.	Chronic gastritis	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Editionby Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	0,5
9.	Gastric ulcer and duodenal ulcer	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Editionby Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	0,5
10.	Bowel disease	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by <u>J. Larry Jameson</u> (Author), <u>Anthony S. Fauci</u> (Author), <u>Dennis L. Kasper</u> (Author), <u>Stephen L. Hauser</u> (Author), <u>Dan L. Longo</u> (Author), <u>Joseph Loscalzo</u> (Author), 2018.	0,5

			organs. To answer questions for self-control	2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Editionby Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	
11.	Diseases of the biliary tract	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	1
12.	Chronic hepatitis	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018	1

				 Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015 	
13.	Cirrhosis	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Edition by Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	1
14.	Chronic pancreatitis	Preparing for in-class work	To study theoretical material on the topic of the class. To revise methods for diagnosing internal organs. To answer questions for self-control	1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018. 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018. 3. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth , 2018 4. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Editionby Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015. 5. On Rounds: 1000 Internal Medicine Pearls 1st Edition , 2015. 6. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015	1

6.2. Methodological guidelines on organizing students' individual work

Individual work of students is conducted following the methodological recommendations of the department teaching the discipline Intermediate Level Therapy, Occupational Diseases:

- 1. Rakhmatullov F.K., Burmistrova L.F. Respiratory diseases: Methodical recommendations for practical lessons. Penza: Penza State University Publ., 2016. p.
- 2. Rakhmatullov F.K., Burmistrova L.F. Diseases of the circulatory system: Methodical recommendations for practical lessons. Penza: Penza State University Publ., 2016. p.
- 3. Rakhmatullov F.K., Burmistrova L.F. Kidney disease: Methodical recommendations for practical lessons. Penza: Penza State University Publ., 2016. p.
- 4. Rakhmatullov F.K., Burmistrova L.F. Diseases of the digestive system: Methodical recommendations for practical lessons. Penza: Penza State University Publ., 2016. p.
- 5. Rakhmatullov F.K., Burmistrova L.F. Occupational disease: Methodical recommendations for practical lessons. Penza: Penza State University Publ., 2016. p.

6.3. Materials for current and interim performance assessment of students' knowledge Competence mastering assessment

№	Type of assessment	Monitored topics (sections)	Competences that include components under assessment
1	Tests checking	Sections № 1, 2, 3, 4, 5, 6	GC-1, GC-8, PC-1, PC-5, PC-6, PC-17, PC-20
2	Case task solution checking	Sections № 1, 2, 3, 4, 5, 6	GC-1, GC-8, PC-1, PC-5, PC-6, PC-17, PC-20
3	Practical skills checking	Sections № 1, 2, 3, 4, 5, 6	GC-1, GC-8, PC-1, PC-5, PC-6, PC-17, PC-20
4	Interview	Sections № 1, 2, 3, 4, 5, 6	GC-1, GC-8, PC-1, PC-5, PC-6, PC-17, PC-20
5	Coursework	Sections № 1, 2, 3, 4, 5, 6	GC-1, GC-8, PC-1, PC-5, PC-6, PC-17, PC-20

Sample test

- 1. What is topographic and anatomical structure of the root of the left lung?
- a) artery, bronchus, vein
- b) bronchus, artery, vein
- c) vein, artery, bronchus
- d) vein, bronchus, artery
- 2. What is the characteristic feature of gangrene of the lung?
- a) lack of clear boundaries inflammation
- b) presence of multiple foci of disintegration
- c) presence of fluid in the pleural cavity
- 3. What therapy is used for treating patients with mild intermittent bronchial asthma?
- a) daily intake of anti-inflammatory drugs

- b) irregular inhalations of beta-2-agonists short-acting
- c) daily inhalations of bronchodilators prolonged action
- d) use of systemic glucocorticoids
- 4. What therapy is used for treating patients with bronchial asthma of medium severity?
- a) daily intake of anti-inflammatory drugs
- b) irregular inhalations of beta-2-agonists long-acting
- c) daily injection of aminophylline
- 5. What therapy is used for treating patients with severe bronchial asthma?
- a) daily intake of antihistamines
- b) irregular inhalations of beta-2-agonists long-acting
- c) daily injection of epinephrine
- d) use of systemic glucocorticoids
- 6. Complications of pneumococcal pneumonia include each of the following, except for:
- A. Delayed resolution
- B. Pleural effusion or empyema
- C. Meningism and even meningitis
- D. Circulatory failure
- E. Pericarditis
- F. Myocarditis
- 7. Choose the incorrect statement about staphylococcal pneumonia:
- A. It may occur as a primary or blood-borne infection from a staphylococcal lesion elsewhere
- B. Chest X-ray may show multiple pneumatoceles
- C. Relatively benign condition with excellent prognosis without antibiotics
- D. Culture of sputum shows a growth of coagulase positive staphylococci
- 8. Choose the incorrect statement about cor pulmonale:
- A. It denotes enlargement of the right ventricle secondary to malfunctioning lungs
- B. Pulmonary hypertension is not a prerequisite for its development
- C. Final outcome depends on the ability to cope with the underlying pulmonary disorder rather than with the changes in the heart and circulation
- 9. Choose the incorrect statement about cough:
- A. It is usually an early symptom in bronchial carcinoma, but may be a relatively late development in pulmonary tuberculosis
- B. Bovine cough refers to the explosive character of cough that is seen in laryngeal paralysis
- C. Presence of an accompanying stridor indicates whooping or laryngeal or tracheal obstruction
- D. In bronchiectasis it is usually loose and readily productive of sputum
- 10. Identify the false statement concerning aspiration pneumonia:
- A. It is also called "nonspecific pneumonia"
- B. Acute lobular pneumonia is of more insidious onset and tends to run a more protracted course
- C. Hypostatic pneumonia occurs in children and young adults, apparently health

Criteria for assessing test answers

- "5" "Excellent" 91% or more correct answers to test tasks;
- "4" "Good" 81-90 % correct answers to test tasks;
- "3" "Satisfactory" 71-80% correct answers to test tasks;
- "2" "Unsatisfactory" 70% or fewer correct answers to test tasks.

The test is considered correctly solved if there are 2/3 correct answers.

Sample practical tasks

- 1. collecting complaints, medical history, life history of the patient
- 2. physical examination of the patient, interpretation of the data;
- 3. preparing the patient examination plan;
- 4. interpreting laboratory and instrumental methods of examination;
- 5. preparing treatment plan for the patient, taking into account the results of laboratory and instrumental methods of examination, calculation of the dose of drugs depending on the glomerular filtration rate;
- 6. evaluating treatment effectiveness;
- 7. preparing the plan of dispensary supervision of the patient;
- 8. conducting conversations with healthy and sick patients on sanitary and hygienic topics.

Criteria for assessing practical skills

15 points - 91-100% correctly performed tasks.

13 points – 81-90% correctly performed tasks.

12 points – 71-80% correctly performed tasks.

11 points - 61-70% correctly performed tasks.

0 points – 60% or fewer correctly performed tasks.

Sample exam questions

- 1. Pneumonia: definition, etiology, classification, pathogenesis, clinical presentation, diagnostic methods.
- 2. Ventricular extrasystoles: etiology, classification, ECG-criteria, diagnostic methods, treatment.
- 3. Occupational diseases of health care workers.
- 4. Arterial hypertension: etiology, pathogenesis, classification of blood pressure in adults, risk factors, target organ damage, associated diseases in arterial hypertension, stages of arterial hypertension, diagnostic methods.
- 5. Gastroesophageal reflux disease: causes, clinical presentation, diagnosis, treatment.
- 6. Galvanization: method description, healing effect, indications and contraindications.
- 7. Infective endocarditis: etiology, pathogenesis, classification, clinical presentation, laboratory and instrumental diagnostics, diagnostic criteria, treatment.
- 8. Chronic gastritis: H. pylori virulence factors, pathogenicity mechanisms, infection outcomes.

- 9. Electrophoresis: method description, healing effect, indications and contraindications.
- 10. Chronic gastritis: definition, etiology, risk factors, pathogenesis, classification, clinical presentation, diagnosis, treatment.

Criteria for assessing answers to theoretical questions

The examination card contains 3 questions

35-40 points	a student deeply understands the material covered, answers clearly and comprehensively, knows how to evaluate facts, independently argues, is able to substantiate conclusions and explain them in a logical sequence		
29-34	a student understands the material well, cannot substantiate some conclusions		
points	theoretically, makes mistakes in reasoning		
24-28	a student has a general idea of the topic, but cannot logically substantiate		
points	his/her thoughts		
23 or	a student's answer is partially correct, serious mistakes in clarifying the		
fewer material are made			
points			
0 points	a student gives no answer		

Sample case tasks

Case task No 1

A 29 year-old patient has a 5 year history of asthma with episodes of bronchospasm that have resulted in hospitalizations. He has been using a B2-selective adrenoreceptor agonist drug via inhalation during the day and long-acting theophylline at night. He comes to the emergency department with severe respiratory distress, cyanosis, and tachycardia. The examination is consistent with severe bronchoconstriction and shows no other complicating factors.

- 1. What is true about the treatment of patient?
 - (A) The use of ipratropium via inhalation is likely to exacerbate his symptoms
 - (B) Parenteral glucocorticoids should not be given until the bronchospasm is relieved
 - (C) The present problem is due to excessive use of the inhaler
 - (D) Cromolyn via inhalation should be given until the bronchospasm is relieved
- (E) Prophylactic corticosteroid therapy after recovery from these episodes should be considered
- 2. What is true about drugs that could be used to treat this patient's asthma?
 - (A) The B2-selective drugs in asthma have no cardiac action
- (B) Cromolyn blocks the airway smooth muscle contraction that occurs in response to vagal stimulation
 - (C) Chronic use of chloropyramine leads to decrease in bronchial reactivity
 - (D) No side effects occur with the use of inhalation forms of the glucocorticoids

Case task № 2

A 30 year-old young lady has been suffering from chronic cough with bouts of dyspnea since the age of 6. Her nutritional status is not as good as one expects in an educated and well-to-do family to which she belongs (Q. 1 & 2, 3).

- 1. What is the most probable diagnosis?
- A. Bronchial asthma
- B. Cystic fibrosis of pancreas
- C. Chronic bronchitis
- D. Tuberculosis.
- 2. Identify the false statement:
- A. She should in no case get pregnant
- B. Steroid inhalation should be preferred to systemic steroid therapy
- C. Regular administration of sodium cromoglycate will be an effective prophylaxis.
- 3. Specify the additional methods of research (write).

Evaluation criteria for solving case history

- "5" (excellent) mark is given for a complete, error-free answer. The student correctly defines the concepts and categories, identifies the main trends and contradictions, and freely uses the theoretical material.
- "4" (good) mark is given for a correct and enough complete answer without mistakes and omissions. The mark may be downgrade if the student has difficulty answering the lecturer's questions. Some mistakes are made in solving case tasks.
- "3" (satisfactory) mark is given for insufficiently full answer with mistakes and some knowledge gaps. The case task is not completely solved.
- "2" (unsatisfactory) mark is given in the absence of theoretical knowledge, case tasks is not solved.

Sample topics of course work

Course work consists in writing a medical history.

- 1. Arterial hypertension
- 2. Chronic heart failure
- 3. Stable Angina Pectoris
- 4. Myocardial infarction
- 5. Heart defects
- 6. Cardiac arrhythmias
- 7. Infective endocarditis
- 8. Pneumonia
- 9. Chronic obstructive pulmonary disease
- 10. Bronchial asthma

- 11. Bronchoectatic disease
- 12. Lung abscess

Description of indicators and evaluation criteria

The mark for the course work is composed of rating for writing and rating for defending the course work.

Rating for writing course work is determined as follows:

52-60 points	The paper fully meets the requirements and scheme of writing course work.						
o z o o pomos	The paper is complete, literate, and logical. The student uses modern medical						
	terminology. The student is able to consciously and quickly transform						
	knowledge gained in characterizing theoretical, clinical, diagnostic, and						
	treatment aspects of therapy						
44-51 points	The paper fully meets the requirements and scheme of writing course work.						
	The paper is complete, literate, and logical. The student uses modern medical						
	terminology. The student follows the logic of presentation, highlights						
	important issues, consciously uses scientific concepts, clinical symptoms,						
	diagnostic data, basic treatment methods, but makes minor mistakes						
36-43 points	The paper meets the requirements and scheme of writing course work. The						
_	student makes mistakes in using definitions, interpreting symptoms, applying						
	methods of diagnosis and/or treatment						
35 or fewer	The material is poorly presented, mistakes in definitions are made. Significant						
points	mistakes in analyzing and presenting clinical situation are made. The paper						
	requires amendments, corrections. The student partially describes the result						
	of clinical examination of patient, does not understand relations between						
	sections. The student makes mistakes in interpreting clinical symptoms,						
	diagnosis and treatment of patient. Content of course work shows the						
	pathology of curated patient, but at same time poor understanding and						
	knowledge of the essence of pathology are seen. Content of course work does						
	not show pathology of curated patient						

Rating for defending course work is determined as follows:

35-40 points	The student deeply understands the material studied, answers clearly and			
	comprehensively, independently argues, is able to evaluate facts, substantiate			
	conclusions and explain them in a logical sequence.			
30-34 points	The student understands the material, answers clearly and comprehensively,			
_	independently argues, is able to evaluate facts, substantiate conclusions and			
	explain them in a logical sequence, but makes some general mistakes.			
24-29 points	The student's answer has some drawbacks, the material is partially covered,			
_	there are mistakes in reasoning, a student is not able to theoretically justify			
	some conclusions.			

^{*&}quot;excellent" mark is given to students, if the total amount of rate points is 87-100;

^{* &}quot;good" mark is given to students, if the total amount of rate points is 73-86;

^{* &}quot;satisfactory" mark is given to students, if the total amount of rate points is 60-72;

* "unsatisfactory " mark is given to students, if the total amount of rate points is less than 60.

7. Methodological and information support of the discipline (module) Intermediate Level Therapy, Occupational Diseases

a) basic literature:

- 1. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2) 20th Edition by
- J. Larry Jameson (Author), Anthony S. Fauci (Author), Dennis L. Kasper (Author), Stephen L. Hauser (Author), Dan L. Longo (Author), Joseph Loscalzo (Author), 2018.
- 2. Davidson's Principles and Practice of Medicine 23rd Edition by Stuart H. Ralston MD FRCP FMedSci FRSE FFPM(Hon) (Editor), Ian D Penman BSc(Hons) MD FRCPE (Editor), Mark W J Strachan BSc(Hons) MD FRCPE (Editor), & 1 more, 2018.

b) additional literature:

- 1. Oxford Textbook of Medicine Edited by David A. Warrell, Timothy M. Cox, and John D. Firth, 2018
- 2. Goldman-Cecil Medicine, 2-Volume Set (Cecil Textbook of Medicine) 25th Editionby Lee Goldman MD (Author), Andrew I. Schafer MD (Author), 2015.
- 3. On Rounds: 1000 Internal Medicine Pearls 1st Edition, 2015.
- 4. Step-Up to Medicine (Step-Up Series) 4th Edition by Steven S. Agabegi (Author), Elizabeth D. Agebegi (Author), 2015

c) Internet resources

- 1. "Microsoft Windows" (subscription DreamSpark/Microsoft Imagine Standart); registration number 00037FFEBACF8FD7, contract number SD-130712001 from 12.07.2013.
- 2. "Kaspersky antivirus" 2016-2017, registration number KL4863RAUFQ, contract number CP-567116 from 29.08.2016.
- 3. free software: OpenOffice; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7-zip.
- 4. http://www.studmedlib.ru Consultant student
- 5. http://sci-lib.com a Library of scientific books and journals, "Sci-Lib»
- 6. https://www.cdc
- 7. https://www.thoracic.org American thoracic society
- 8. https://emedicine.medscape.com
- 9. https://www.ersnet.org- European respiratory society
- 10. https://www.escardio.org European society of cardiology
- 11. https://www.acc.org American College of Cardiology
- 12. https://www.theisn.org International society of Nephrology
- 13. https://www.asn-online.org American Society of Nephrology

8. Material and technical support of the discipline

Name of special rooms and premises for individual work	Equipment of special rooms and premises for individual work	List of licensed software. Details of the supporting document
Lecture hall 10-201	Set of educational furniture: tables, chairs. Multimedia system (projector, screen, laptop).	Microsoft Windows (subscription DreamSpark/Microsoft Imagine Standart); registration number 00037FFEBACF8FD7, contract number SD-130712001 from 12.07.2013; Kaspersky anti-virus 2016-2017, registration number KL4863RAUFQ, contract number CP-567116 from 29.08.2016; free software: OpenOffice; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7-zip.
Classroom number 1 for practical classes	Set of educational furniture: tables, chairs, blackboard. Laptop.	
G.A. Zakharyn City Clinical Hospital no. 6 according to the contract with health care facility Training room number 2 for	Case history of the disease with the results of studies is managed on medical equipment: -SIEMENS ACUSON X-300 Ultrasound system -X-ray apparatus, KRD-"Maxim"; - X-ray apparatus, "ABRIS" RDS - CT Scanner Toshiba "Aquilion -MRI Scanner GE "Signa HD" 1,5 T -Astrocard "Polysystem-EP/L"; - Treadmill Astrocard "Trackmaster", - Treadmill Excite®+ "Run 600 Treadmill"; - SCHILLER Ergometer "ERG 911BP"; - Schiller "BR-102 PLUS" 24-hour ambulatory blood pressure monitoring; - SCHILLER Holter monitor "Microvit MT-101"; - SCHILLER "AT-2" ECG machine; -PHILIPS "HD 11XE" Ultrasound system; -«Spiro-Spectrum» Spirometer; - Ergometer Medicor "KE-12"; - Bplab "MnSDP-2" 24-hour ambulatory blood pressure monitoring; - Astocard Holter monitor "HE2", according to the hospital contract. Set of educational furniture: tables, chairs, blackboard.	Microsoft Windows (subscription DreamSpark/Microsoft Imagine Standart); registration number 00037FFEBACF8FD7, contract number SD-130712001 from 12.07.2013; Kaspersky anti-virus 2016-2017, registration number KL4863RAUFQ, contract number CP-567116 from 29.08.2016; free software: OpenOffice; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7-zip.
practical classes G.A.	Laptop.	
Zakharyn City Clinical Hospital no. 6 according to the contract	Case history of the disease with the results of studies is managed on medical equipment:	Microsoft Windows (subscription DreamSpark/Microsoft Imagine Standart); registration number 00037FFEBACF8FD7, contract

with health care facility	-SIEMENS ACUSON X-300 Ultrasound system -X-ray apparatus, KRD-"Maxim"; - X-ray apparatus, "ABRIS" RDS - CT Scanner Toshiba "Aquilion -MRI Scanner GE "Signa HD" 1,5 T -Astrocard "Polysystem-EP/L"; - Treadmill Astrocard "Trackmaster", - Treadmill Excite®+ "Run 600 Treadmill";	number SD-130712001 from 12.07.2013; Kaspersky anti-virus 2016-2017, registration number KL4863RAUFQ, contract number CP-567116 from 29.08.2016; free software: OpenOffice; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7-zip.
	- SCHILLER Ergometer "ERG 911BP"; - Schiller "BR-102 PLUS" 24-hour ambulatory blood pressure monitoring; - SCHILLER Holter monitor "Microvit MT-101"; - SCHILLER "AT-2" ECG machine; - PHILIPS "HD 11XE" Ultrasound system; - «Spiro-Spectrum» Spirometer; - Ergometer Medicor "KE-12"; - Bplab "MnSDP-2" 24-hour ambulatory blood pressure monitoring; - Astocard Holter monitor "HE2", according to the hospital contract.	
Classroom for individual work: PSU 10-204	Set of educational furniture: tables, chairs, training board. Computers with training CDs	1. Microsoft Windows (subscription DreamSpark/Microsoft Imagine Standart); registration number 00037FFEBACF8FD7, contract number SD-130712001 from 12.07.2013; 2. Kaspersky antivirus 2016-2017, registration number KL4863RAUFQ, contract number CP-567116 from 29.08.2016; 3. Free software: Open Office; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7zip
Classroom for individual work: PSU 10-209	Set of educational furniture: tables, chairs, training board. Computers with training CDs	1. Microsoft Windows (subscription DreamSpark/Microsoft Imagine Standart); registration number 00037FFBACF8FD7, contract number SD-130712001 from 12.07.2013; 2. Kaspersky antivirus" 2016-2017, registration number KL4863RAUFQ, contract number CP-567116 from 29.08.2016; 3.Free software: Open Office; Mozilla Firefox; Google Chrome; Adobe Acrobat Reader; 7zip

The study program of the discipline Intermediate Level Therapy, Occupational Disease was composed in compliance with the requirements of FSES HE and curriculum for the educational program 31.05.01 General Medicine.

The	program was compiled by:		7
1.	Associate Professor of the Department of	of Internal Disease	L.F. Burmistrova
2.	Associate Professor of the Department of	of Internal Disease	T.N. Belugina
The forn	present study program is protected by a without writer consent of the departme	copyright and canno ent developed the progr	t be reproduced in an
The	program was approved at the department n	meeting.	
Reco	ord No	dated «»	
Head	d of the Department of Internal Diseases	De	F.K. Rakhmatullov
	program was approved by n of the Faculty of General Medicine		₩А.¥a. Moiseeva
	program was approved by the Methodolog		edical Institute
Rec	ord No		
Hea	d of the Methodological Committee	Mos	O.V. Kalmin

I certify that it is an accurate translation of the original documents
Translator of PSU International Projects Department
Marila Pchelinteeva Chromony

41

Data on re-approval of the program for consecutive academic years and record of amendments

Academic	Department	Introduced amendments		Page numbers	
year	decision		changed	new	annulled
	(Record No.				
	date, signature of				
	head of the				
	department)				
2016-	No. 2,	No changes	_	_	_
2017	03/09/2016				
2017-	No. 2,	1. Changes were made to	1	-	-
2018	05.09.2017	the title page of the study			
		program from "General			
		practitioner" to " Medical			
		doctor".			
		The description of the	1		
		application of educational technologies	1		
		for students with			
		disabilities was added in			
		paragraph 5			
2018-	No. 19	No changes	-	-	-
2019	dated				
	05.07.18				
2010	No. 10	No changes			
2019- 2020	No. 19 dated	No changes	-	-	-
2020	29.06.19				
	27.00.19				