

ОНТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		 SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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Working curriculum of the discipline "Cardiovascular system in pathology" (Syllabus)		

Syllabus

Working curriculum of the discipline "Cardiovascular system in pathology" Educational program 6B10115 "Medicine"

1.	General information about the discipline		
1.1	Code of the discipline: CSP 3304	1.6	Academic year: 2025-2026
1.2	Name of the discipline: Cardiovascular system in pathology	1.7	Course: 3
1.3	Prerequisites: General pathology, cardiovascular system in normal	1.8	Semester: 5
1.4	Postrequisites: Basics of internal diseases	1.9	Number of credits (ECTS): 5
1.5	Cycle: PD	1.10	Component: UC
2.	Description of the discipline		
Integrated discipline: formation of fundamental knowledge on semiotics, syndromology, physical examination methods, etiology, pathogenesis and morphogenesis of cardiovascular system, mastering the skills of selection and analysis of the effectiveness of diagnostic methods and properties of drugs for the treatment of diseases, taking into account the principles of evidence-based medicine and patient-centered approach.			
3.	Summative Assessment Form		
3.1	• Testing	3.5	Coursework
3.2	Writing	3.6	Essay
3.3	Oral	3.7	Project
3.4	• OSPE/OSKE or practical skills assessment	3.8	Other (specify)
4.	Objectives of the discipline		
Formation of a holistic understanding of cardiovascular pathology based on symptoms and syndromes, as well as on methods of their study. Ensuring the achievement of final learning outcomes based on joint study of cardiovascular pathology in the propaedeutics of internal diseases with fundamental disciplines. Formation of clinical thinking skills based on knowledge of pathophysiological mechanisms of the course, pathological changes, complications and outcomes of diseases, physical and clinical laboratory methods of examination and selection of drugs in adults with the main clinical syndromes in cardiovascular pathology			
5.	Final learning outcomes (LO of the discipline)		
LO1	Demonstrates knowledge and understanding of the basics of semiotics and syndromology, etiology, pathogenesis and morphogenesis of cardiovascular pathology.		
LO2	Proficient in methods of conducting interviews and physical examination of adults, uses clinical thinking in collecting information when drawing up an examination plan; outlines the scope of basic and additional studies to clarify the syndrome of damage in pathology of the cardiovascular system.		
LO3	Uses clinical thinking in collecting information when interpreting the results of morphological, laboratory and instrumental methods of examining patients with cardiovascular pathology, formulates a syndromic diagnosis, and fills out a medical history.		
LO4	Communicates information, ideas, problems and solutions to patients and their family members, and is proficient in ethical and deontological practices when communicating with patients, their relatives and colleagues.		
LO5	Determines pathological processes at the organ and cellular levels, interprets data on the pathophysiology and morphology of diseases taking into account the clinical data of patients, makes conclusions, explains the patterns of development of complications and outcomes of cardiovascular pathology, evaluates the results of experimental studies.		
LO6	Selects medications in accordance with the diagnosis, writes prescriptions, determines the dosage regimen, recognizes adverse effects of medications, predicts the development of side effects and interactions of medications used in cardiovascular pathology.		
LO7	Analyzes professional literature when working with scientific articles, completes a project, demonstrates a desire for continuous improvement of his/her activities.		
5.1	LO discipline	Learning outcomes of the EP, which are associated with the discipline LO	

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	LO 1	LO1. Applies fundamental knowledge of biomedical, clinical, epidemiological, and social-behavioral sciences to practice.
	LO 2	
	LO 3	LO2. Provides patient-centered care in biomedical, clinical, epidemiological sciences aimed at diagnosis, treatment and prevention of the most common diseases.
	LO 4	
	LO 5	LO6. Conducts outpatient appointments, diagnosis, treatment, follow-up and rehabilitation of pediatric and adult patients, including pregnant women, based on evidence-based practice principles.
	LO 6 LO7	LO11. Analyzes the effectiveness of diagnosis and treatment results, applying the principles of personalized medicine.

6. Detailed information about the discipline

6.1	• Location of the Department of Pathology and Forensic Medicine: Shymkent, Al-Farabi sq., 3, academic building No. 2 SKMA, 4th floor, rooms No. 404 a, b, No. 406, No. 408, No. 409, No. 411 a, b; e-mail: Patan.gisto@mail.ru • Location of the Department of Pharmacology, Pharmacotherapy and Pharmacology Clinic: Shymkent, Al-Farabi Ave., 1, main academic building of SKMA, 4th floor, auditorium #419, #421, #425, #429, #431, #434, #417, lecture hall #4; tel. 40-82-06 (ATS), 227 (ext.). • Location of the Department of Internal Medicine Propaedeutics: Shymkent, ParkHealth Clinic, Kurmanbekov St., 2; tel.: 8 701 738 6114, e-mail: propedevtica_vb@mail.ru
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6.3 Study plan for the discipline

Days		1	2	3	4	5	6	7	8	9	10	11	12	Hours
Form of the lesson														
Pharmacology (1 cr.)	Lecture	1								1				2
	Practical	3			1					4				8
	SIWT	1			1					1				3
	SIW	6			2					6				14+3(IA)=17
Pathological physiology (1 cr.)	Lecture		1								1			2
	Practical		3						2		3			8
	SIWT		1						1		1			3
	SIW		6						2		6			14+3(IA)=17
Propaedeutics of internal diseases (2 cr.)	Lecture			1		1		1	1					4
	Practical			4		3		3	1			3	2	16
	SIWT			1		1		1	1			1	1	6
	SIW			6		6		6	4			5	1	28+6(IA)=34
Pathological anatomy (1 cr.)	Lecture				1		1							2
	Practical				2		4						2	8
	SIWT				1		1						1	3
	SIW				4		6						4	14+3(IA)=17

7. Information about teachers

No.	Full name	Degrees and Position	Email address
Department of Pathology and Forensic Medicine			
1	Sadykova Aliya Shamilevna	Head of the Department of Pathology and Forensic Medicine, Doctor of Medical Sciences, Acting Professor	aliya.sadykova.66@mail.ru
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3	Dosybaev Bakhytzhann Krykbaevich	PhD, Acting Associate Professor	Krik85@mail.ru
4	Khodjaev Nurlan Kenzhetoreevich	PhD, Acting Associate Professor	nkkhoja@mail.ru
5	Kulbalieva Zhannat Zhakslikovna	PhD, Acting Associate Professor	zhann_7@mail.ru
6	Sedykh Egor Pavlovich	PhD, Acting Associate Professor	egorsedykh1986@yandex.co

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			m
7	Kerimov Rasim Azatovich	Master, Senior Lecturer	Kir-2004@list.ru
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11	Kurymbaeva Ainur Rashidkyzy	Assistant	Smp_zoj@mail.ru
12	Seidakbar Aisana Usenovna	Teacher	aseydakbar@mail.ru
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Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology			
1	Ibragimova Aigul Gaffarovna	PhD, Acting Associate Professor	aygul_ibr@mail.ru
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Department of Propaedeutics of Internal Diseases			
1	Bekmurzaeva Elmira Kuanyshevna	Head of the Department, Doctor of Medical Sciences, Professor	Elmira-bek@mail.ru
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8. Thematic plan

Day	Form of the lesson	Topic Title	Summary	LO of module	Number of hours	Forms/ methods/ learning technologies	Forms/ evaluation methods
1	Pharmacology. Lecture 1	Drugs affecting the cardiovascular system. Antianginal drugs. Antiarrhythmic drugs.	Medicines used for ischemic heart disease, medicines used for heart rhythm disorders (antianginal, antiarrhythmic drugs). Classification of medicines. Pharmacological characteristics of medicines. Comparative characteristics of drugs and application. Side effects.	LO1	1	Overview lecture	Quick poll Feedback
	Pharmacology. Practical lesson 1	Medicines used for arterial hypertension.	Drugs used for arterial hypertension. Classification. Diuretics, beta- blockers, alpha 1-blockers, direct vasodilators, calcium antagonists, ACE inhibitors, angiotensin receptor antagonists, central alpha-2	LO6	3	Work in small groups, discussion of the topic, case solution	Topic discussion checklist, case solution checklist

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			adrenergic agonists. Pharmacological characteristics of drugs.				
	Pharmacology. SIWT/SIW 1	Drugs used in acute coronary syndrome.	Drugs used in acute coronary syndrome. Medicines used for heart rhythm disorders (antiarrhythmic drugs). Drugs used in ventricular heart rhythm disorders. Prevention of sudden cardiac death.	LO7	1/6	Presentation Defense	Presentation Protection Checklist
2	Pathological physiology. Lecture 1	Heart rhythm disorders	Heart rhythm disorders, types, development mechanisms, manifestations. Cardiac automatism disorders. Cardiac excitability disorders. Extrasystoles. Conduction disorders. Heart blocks. Clinical significance	LO1	1	Overview lecture	Quick poll Feedback
	Pathological physiology. Practical lesson 1	Heart rhythm disorders	Heart rhythm disorders, types, development mechanisms, manifestations. Cardiac automatism disorders. Cardiac excitability disorders. Extrasystoles. Conduction disorders. Heart blocks. Clinical significance	LO3 LO5	3	Work in small groups, discussion of the topic, case solution	Topic Discussion Checklist, case solution checklist
	Pathological physiology. SIWT/SIW 1	Disorders of vascular tone.	Vascular tone disorders, types. Arterial hypertension. Primary arterial hypertension, etiology, pathogenesis. Symptomatic hypertension, types, etiopathogenesis. Vascular insufficiency, types, development mechanisms, manifestations. Clinical significance	LO3 LO5 LO7	1/6	topic case solution	Case Solution Checklist
3	Propedeutics of internal diseases. Lecture 1	Methods of examination of patients with cardiovascular diseases: questioning, general examination, palpation And percussion of the heart of patients With pathology cardiovascular system. Methods of	Methods of examination of patients with cardiovascular diseases: questioning, general examination, palpation And percussion of the heart of patients With pathology cardiovascular system. Methods of studying large and peripheral vessels. Auscultation of the heart in norm and pathology in patients With pathology cardiovascular system. Diagnostic value.	LO2	1	Overview lecture	Blitz Poll Feedback

		studying large and peripheral vessels. Auscultation of the heart in norm and pathology in patients With pathology cardiovascular system. Diagnostic value.					
	Propedeutics of internal diseases. Practical lesson 1	Questioning, main and additional complaints and general examination of the chest of patients with cardiovascular pathology systems. Palpation and percussion heart in patients with cardiovascular pathology systems. Diagnostic value.	Questioning, main and additional complaints and general examination of the chest of patients with cardiovascular pathology systems. Palpation of the area of the heart: determination of the apical impulse. Inspection and palpation of the large vessels. Percussion hearts.	LO2 LO3 LO4	4	Discussion of the topic of the practical lesson, solving situational problems.	Checklist for oral questionin g, checklist for solving a situational problem
	Propedeutics of internal diseases. SIWT/SIW 1	Palpation and percussion heart in patients with cardiovascular pathology systems. Diagnostic value.	Technique and methods of palpation, percussion of the heart, determination of the apical impulse, relative and absolute boundaries of the heart, vascular bundle, heart configuration. Diagnostic value.	LO2 LO3	1/6	Presentation defense and practical skills implementation	and Practical Skills Assessment Checklist
4	Pharmacology. Practical lesson 2	Drugs used for ischemic heart disease.	Drugs used in ischemic heart disease. Antianginal drugs. Classification. Organic nitrates, beta-blockers, calcium antagonists, myotropic and reflex coronary dilators. Pharmacological characteristics of drugs.	LO6	3	Work in small groups, discussion of the topic, case solution	Topic Discussion Checklist, case solution checklist
	Pharmacology. SIWT/SIW 2	Drugs used in acute myocardial infarction	Medicines used in acute myocardial infarction. Opioid analgesics, cardiac glycosides,	LO7	1/2	Presentation Defense	Presentation Protection Checklist

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			antiarrhythmic agents, organic nitrates, direct-acting anticoagulants, antiplatelet agents, fibrinolytics.				
	Pathological anatomy. Lecture 1	Pathological anatomy of heart diseases	Atherosclerosis. Arterial hypertension. Acute ischemic heart disease. Ischemic myocardial dystrophy. Myocardial infarction. Chronic ischemic heart disease. Cardiosclerosis. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO1	1	Overview lecture	Quick poll Feedback
	Pathological anatomy. Practical lesson 1	Pathological anatomy of heart diseases	Atherosclerosis. Arterial hypertension. Acute ischemic heart disease. Ischemic myocardial dystrophy. Myocardial infarction. Chronic ischemic heart disease. Cardiosclerosis. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO3 LO5	2	Discussion of the topic, description of macro- and micro- preparatov with the conclusion nim, case solution	Checklist descriptions of macro- and micropreparati ons, case solution checklist
	Pathological anatomy. SIWT/SIW 1	Pathological anatomy of heart diseases	Congenital and acquired cardiomyopathies. Infectious myocarditis, endocarditis. Pericarditis. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance.	LO3 LO5	1/4	Case solving	Case solution checklist
5	Propedeutics of internal diseases. Lecture 2	Leading clinical syndromes in sick With diseases cardiovascular system: high blood pressure and coronary heart disease.	Main causes, risk factors, clinical picture, classification, laboratory And instrumental research methods arterial hypertension and ischemic heart disease.	LO2	1	Overview lecture	Blitz Poll Feedback
	Propedeutics of internal diseases. Practical lesson 2	Auscultation hearts And vessels V norm and in pathology. Diagnostic value.	Auscultation hearts And vessels V norm and in pathology. Determination of the main and additional points of the heart. Heart sounds. Pathological heart murmurs. Diagnostic value.	LO2 LO3 LO4	3	Discussion of the topic of the practical lesson, solving situational problems.	Checklist for oral questionin g, checklist for solving a

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							situational problem
	Propedeutics of internal diseases. SIWT/SIW 2	Auscultation heart in patients with cardiovascular pathology systems in norm and pathology. Diagnostic value.	Auscultation heart in patients with cardiovascular pathology systems in norm and pathology.. Diagnostic value.	LO2 LO3	1/6	Presentation defense and practical skills implementation	Checklist for Presentation Defense and Acquisition of Practical Skills
6	Pathological anatomy. Lecture 2	Pathological anatomy of the cardiovascular system	Rheumatism. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO1	1	Overview lecture	Quick poll Feedback
	Pathological anatomy. Practical lesson 2	Pathological anatomy of the cardiovascular system	Rheumatism. Acute and chronic heart failure. Pulmonary heart. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO3 LO5	4	Discussion of the topic, description of macro- and micro- preparatov with the conclusion nim, case solution	Checklist descriptions of macro- and micropreparati ons, case solution checklist
	Pathological anatomy. SIWT/SIW 2	Border control #1	Topics of lectures, practical classes, independent work, covered during 1 - 6 days of training	LO1 LO2 LO3 LO4 LO5 LO6	1/6	Integrated monitoring of educational achievements using control training cases, solving test tasks	Checklist case solutions, testing checklist
7	Propedeutics of internal diseases. Lecture 3	Leading clinical syndromes in sick With diseases cardiovascular system : acute and chronic coronary insufficiency. Diseases of the pericardium and myocardium. Dyslipidemia.	Main causes, risk factors, clinical picture, classification, laboratory And instrumental research methods arterial hypertension and ischemic heart disease.	LO2	1	Overview lecture	Blitz Poll Feedback

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		Hypotension.					
	Propedeutics of internal diseases. Practical lesson 3	Leading clinical syndromes (high blood pressure and ischemic disease hearts) at sick with cardiovascular diseases. Diagnostic value.	Leading clinical syndromes (high blood pressure and ischemic disease hearts) at sick with cardiovascular diseases. Etiology, risk factors, classification, clinical picture, diagnostics. Diagnostic value.	LO2 LO3 LO4	3	Discussion of the topic of the practical lesson, solving situational problems.	Checklist for oral questionin g, checklist for solving a situational problem
	Propedeutics of internal diseases. SIWT/SIW 3	Laboratory and instrumental research methods leading clinical syndromes of the cardiovascular system: high blood pressure and ischemic disease hearts.	Laboratory and instrumental research methods leading clinical syndromes of the cardiovascular system: high blood pressure and coronary heart disease hearts. Diagnostic value.	LO2 LO3	1/6	Presentation Defense	Presentation Protection Checklist
8	Pathological physiology. Practical lesson 2	Coronary insufficiency	Ischemic myocardial injury. Coronary insufficiency, pathogenesis. Myocardial infarction, pathogenesis, manifestations, complications. Pathogenesis of myocardial reperfusion injury. Endogenous mechanisms of cardiac protection during ischemia and reperfusion. Atherosclerosis, etiopathogenesis, its role in the development of coronary heart disease. Clinical significance	LO3 LO5	2	Work in small groups, discussion of the topic, case solution	Topic Discussion Checklist, case solution checklist
	Pathological physiology. SIWT/SIW 2	Non-coronary heart disease of non-rheumatic etiology	Etiopathogenesis, manifestations, myocardial dystrophy, myocarditis, infective endocarditis, pericarditis, cardiomyopathy. Clinical significance	LO3 LO5	1/2	Case solving	Case Solution Checklist
	Propedeutics of internal diseases. Lecture 4	Presenters clinical syndromes at sick with cardiovascular diseases: lesions valve	Main causes, risk factors, clinical picture, classification, laboratory And instrumental research methods arterial hypertension and ischemic heart disease.	LO2	1	Overview lecture	Blitz Poll Feedback

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		apparatus, arrhythmia. Diagnostic value.					
	Propedeutics of internal diseases. Practical lesson 4	Leading clinical syndromes (acute And chronic coronary insufficiency) sick with cardiovascular diseases.	Leading clinical syndromes (acute And chronic coronary insufficiency) sick with cardiovascular diseases. Etiology, risk factors, classification, clinical picture, diagnostics. Diagnostic value.	LO2 LO3 LO4	1	Discussion of the topic of the practical lesson, solving situational problems.	Checklist for oral questionin g, checklist for solving a situational problem
	Propedeutics of internal diseases. SIWT/SIW 4	Laboratory and instrumental research methods leading clinical syndromes of the cardiovascular system: acute And chronic coronary insufficiency Diagnostic value.	Laboratory and instrumental research methods leading clinical syndromes of the cardiovascular system: (acute And chronic coronary insufficiency. Diagnostic value.	LO2 LO3	1/4	Preparation and presentation protection	Presentation Evaluation Checklist
9	Pharmacology. Lecture 2	Medicines used for heart failure. Cardiovascular agents.	Drugs used in acute and chronic heart failure. Cardiac glycosides, non-glycoside cardiotonic agents. ACE inhibitors, diuretics, beta - blockers. Mechanism of action, indications, contraindications and side effects.	LO1	1	Overview lecture	Quick poll Feedback
	Pharmacology. Practical lesson 3	Cardiovascular agents. Antiatherosclerotic agents.	Cardiac glycosides, non-glycoside cardiotonic agents. Pharmacological characteristics of drugs. Side effects. Hypolipidemic drugs. Classification of drugs. Mechanism of action, indications for use, contraindications and side effects. Comparative characteristics of drugs. Side effects.	LO6	3	Discussion of the topic, description of macro- and micro- paratov with the conclusion nim, case solution	Checklist descriptions of macro- and micropreparati ons, case solution checklist
	Pharmacology. SIWT/SIW 3	Drugs used for arterial hypotension.	Classification of drugs. Mechanism of action, indications for use, contraindications and side	LO7	1/6	Preparation and presentation protection	Presentation Evaluation Checklist

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			effects. Comparative characteristics of drugs. Side effects.				
10	Pathological physiology. Lecture 2	Heart failure. Acquired heart defects.	Heart failure, classification, etiopathogenesis, manifestations, mechanisms of compensation and decompensation. Myocardial hypertrophy. Acquired heart defects. Mitral insufficiency, mitral stenosis, tricuspid valve defects, aortic and pulmonary valve defects, hemodynamic disorders, manifestations. Rheumatism, etiopathogenesis, its role in the formation of heart defects. Clinical significance	LO1	1	Overview lecture	Quick poll Feedback
	Pathological physiology. Practical lesson 3	Heart failure. Acquired heart defects.	Heart failure, classification, etiopathogenesis, manifestations, mechanisms of compensation and decompensation. Myocardial hypertrophy. Acquired heart defects. Mitral insufficiency, mitral stenosis, tricuspid valve defects, aortic and pulmonary valve defects, hemodynamic disorders, manifestations. Rheumatism, etiopathogenesis, its role in the formation of heart defects. Clinical significance	LO3 LO5	3	Work in small groups, discussion of the topic, case solution	topic discussion checklist, case solution checklist
	Pathological physiology. SIWT/SIW 3	Congenital heart defects	Congenital heart defects, types, Causes, manifestations. Mechanisms of formation. Clinical significance.	LO3 LO5 LO7	1/6	Case solving	Case solution checklist,
11	Propedeutics of internal diseases. Practical lesson 5	Leading clinical syndromes in sick with cardiovascular diseases. Diseases of the myocardium and pericardium. Dyslipidemia. Hypotension. Diagnostic value.	Leading clinical syndromes in sick with cardiovascular diseases. Diseases of the myocardium and pericardium. Dyslipidemia. Hypotension. Etiology, risk factors, classification, clinical picture, diagnostics. Diagnostic value.	LO2 LO3 LO4	3	Discussion of the topic of the practical lesson, solving situational problems.	Checklist for oral questionin g, checklist for solving a situational problem
	Propedeutics of	Laboratory and	Laboratory and instrumental	LO2	1/5	Preparation and	Presentation

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	internal diseases. SIWT/SIW 5	instrumental research methods diseases of the myocardium and pericardium; dyslipidemia; hypotension. Diagnostic value.	research methods diseases of the myocardium and pericardium; dyslipidemia; hypotension. Diagnostic value.	LO3		presentation protection	Evaluation Checklist
12	Propedeutics of internal diseases. Practical lesson 6	Presenters clinical syndromes (defeats valve apparatus) at sick with cardiovascular diseases. Arrhythmia. Diagnostic value.	Presenters clinical syndromes (defeats valve apparatus) at sick with cardiovascular diseases. Arrhythmia. Etiology, classification, risk factors, clinical picture, diagnostics. Diagnostic value.	LO2 LO3 LO4	2	Discussion of the topic of the practical lesson, solving situational problems.	Checklist for oral questionin g, checklist for solving a situational problem
	Propedeutics of internal diseases. SIWT/SIW 6	Laboratory and instrumental research methods for lesions of the valve apparatus; for arrhythmias. Diagnostic value.	Laboratory and instrumental research methods for lesions of the valve apparatus; for arrhythmias. Diagnostic value.	LO2 LO3	1/1	Presentation Defense	Presentation Protection Checklist
	Pathological anatomy. Practical lesson 3	Pathological anatomy of the cardiovascular system	Congenital and acquired heart defects. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO3 LO5	2	Discussion of the topic, description of macro- and micro- paratov with the conclusion nim, case solution	Checklist descriptions of macro- and micropreparati ons, case solution checklist
	Pathological anatomy. SIWT/SIW 3	Border control #2	independent work, covered during 7-12 days of training	LO1 LO2 LO3 LO4 LO5 LO6	1/4	Integrated monitoring of educational achievements using control training cases, olving test tasks	Checklist case solutions, testing checklist
Preparation and implementation of interim assessment							15 hours

9. Teaching methods and control forms		
9.1	Lectures	Overview lectures (quick survey)
9.2	Practical classes	Work in small groups, discussion of the topic, oral questioning, writing out prescriptions, solving a case, describing macro- and micropreparations with a conclusion, performing practical skills, interpretation of clinical laboratory test results.

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9.3	SIWT/SIW	Case study solution, scientific article analysis, Presentation defense and practical skills implementation, discussion of the topic. Project defense.			
9.4	Midterm exam	Integrated monitoring of educational achievements using control educational cases, testing.			
10.	Evaluation criteria				
10.1	Criteria for assessing the learning outcomes of the discipline				
No. LO	Name of learning outcomes	Unsatisfactory	Satisfactory	Good	Excellent
LO 1	Demonstrates knowledge and understanding of the basics of semiotics and syndromology, etiology, pathogenesis and morphogenesis of pathology of the genitourinary system	1. Does not have a knowledge of the basics of semiotics and syndromology, does not identify symptoms and syndromes. 2. Cannot explain the etiology, pathogenesis and morphogenesis of pathological changes in the genitourinary system	1. Does not have a basic understanding of semiotics and syndromology, makes gross errors in determining symptoms and syndromes in pathologies of the genitourinary system. 2. Makes mistakes when explaining the etiology, pathogenesis and morphogenesis of pathological changes in the genitourinary system	1. Has a basic understanding of semiotics and syndromology, and can identify symptoms and syndromes. 2. Explains the etiology, pathogenesis and morphogenesis of pathological changes in the genitourinary system, but allows for fundamental inaccuracies	1. Fluently masters the basics of semiotics and syndromology, independently identifies symptoms and syndromes. 2. Freely explains the etiology, pathogenesis and morphogenesis of pathological changes in the genitourinary system
LO2	Has knowledge of methods of conducting questioning, physical examination of adults and children, uses clinical thinking in collecting information when drawing up an examination plan; outlines the scope of basic and additional studies to clarify the syndrome of damage in pathology of the genitourinary system	Does not know the basic pathophysiological processes in the genitourinary system. Unable to explain the mechanisms	Makes mistakes when describing the main pathological changes in the genitourinary system. Able to explain the mechanisms with errors	Describes the basic genitourinary system. Able to fully explain the mechanisms	Demonstrates the basic genitourinary system. Able to sketch the mechanisms
LO 3	Uses clinical thinking in collecting information when interpreting the results of morphological, laboratory and instrumental methods of examining patients with pathology of	Does not know the main metabolic pathways that affect the function of the genitourinary system. Doesn't understand biochemical processes	Does not fully understand the main metabolic pathways that affect the function of the genitourinary system. Poor understanding of biochemical processes	Explains the main metabolic pathways that affect the function of the genitourinary system. Has a good understanding and knowledge of biochemical processes	Possesses clinical thinking skills, applies knowledge in collecting information when interpreting the results of morphological, laboratory and instrumental methods of examining patients with pathology of the genitourinary system.

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	the genitourinary system, formulates a syndromic diagnosis, fills out a medical history				formulates a syndromic diagnosis, fills out a medical history. Effectively solves situational problems
LO 4	Communicates information, ideas, problems and solutions to patients and their family members, and is proficient in ethical and deontological practices when interacting with patients, their relatives and colleagues	Does not know how to apply knowledge of the genitourinary system in a clinical context, has not acquired the skills to collect a clinical history and perform a physical examination of patients with diseases of the genitourinary system to provide first aid, does not able to interpret the results of laboratory and instrumental studies	Does not fully know how to apply knowledge about the genitourinary system in a clinical context, collects clinical anamnesis and physical examination of patients with diseases of the genitourinary system to provide first aid with errors, poorly oriented in interpreting the results of laboratory and instrumental studies	Lists information about the genitourinary system in a clinical context, collects clinical history and physical examination of patients with diseases of the genitourinary system with the provision of first aid, is well versed in interpreting the results of laboratory and instrumental studies	Freely demonstrates knowledge of the genitourinary system in a clinical context, collects clinical anamnesis and physical examination of patients with diseases of the genitourinary system with the provision of first aid, is well versed in interpreting the results of laboratory and instrumental studies
LO 5	Determines pathological processes at the organ and cellular levels, interprets data on the pathophysiology and morphology of diseases taking into account the clinical data of patients, makes conclusions, explains the patterns of development of complications and outcomes of pathology of the genitourinary system, evaluates the results of experimental studies	1. Is unable to determine pathological processes at the organ and cellular levels, makes gross errors. 2. Cannot interpret data on the etiology, pathophysiology and morphology of diseases taking into account the clinical data of patients. 3. Makes erroneous conclusions, has poor orientation and does not explain the patterns of development of complications and outcomes of pathology of the genitourinary system. 4. Is unable to evaluate the results of experimental studies and makes fundamental mistakes. 5. Incapable of solving situational problems	1. Determines pathological processes at the organ and cellular levels, but makes gross errors. 2. Cannot independently interpret data on the etiology, pathophysiology and morphology of diseases taking into account the clinical data of patients. 3. Makes erroneous conclusions, finds it difficult to independently explain the patterns of development of complications and outcomes of pathology of the genitourinary system. 4. Finds it difficult to evaluate the results of experimental studies and makes fundamental inaccuracies. 5. Solves situational problems, but makes fundamental mistakes	1. Determines pathological processes at the organ and cellular levels. 2. Interprets data on the etiology, pathophysiology and morphology of diseases, taking into account the clinical data of patients. 3. Draws conclusions, explains the patterns of development of complications and outcomes of pathology of the genitourinary system. 4. Evaluates the results of experimental studies, but allows for minor inaccuracies. 5. Solves situational problems	1. Independently identifies pathological processes at the organ and cellular levels. 2. Independently interprets data on the etiology, pathophysiology and morphology of diseases, taking into account the clinical data of patients. 3. Draws conclusions, explains the patterns of development of complications and outcomes of pathology of the genitourinary system. 4. Evaluates the results of experimental studies. 5. Effectively solves situational problems
LO 6	Selects medications in accordance with the diagnosis,	1. Defines the general pharmacological group of drugs.	1. Selects a pharmacological group of drugs by organs and	1. Selects medications for the treatment and	1. Selects medications from various pharmacological

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	writes prescriptions, determines the dosage regimen, recognizes adverse effects of medications, predicts the development of side effects and interactions of medications used in pathology of the genitourinary system	2. writes out a prescription with errors	systems. 2. Writes out a prescription using reference literature/sources	prevention of the most common diseases. 2. Writes out a prescription for the specified medication without errors. 3. Calculates the dose of the drug	groups in accordance with indications for use, contraindications and side effects 2. Writes out a prescription for medications in the most appropriate dosage form depending on age, gender, and functional characteristics. 3. Calculates doses using various methods and determines the frequency and duration of use of the drug
LO7	Analyzes professional literature when working with scientific articles, carries out a project, demonstrates a desire for continuous improvement of his/her activities	1. Does not have research skills. 2. Does not have a desire for continuous self-education and development	1. Cannot analyze the topics of the classes. 2. Participates in the implementation of the project. 3. Violates deadlines for completing tasks	1. Analyzes scientific articles on the topics of the lesson. 2. Participates in the implementation of the project. 3. Completes assignments on time	1. Analyzes scientific articles on the topics of the lesson. 2. Uses international databases. at work 2. Successfully defends the completed project. 3. Demonstrates motivation for independent work, approaches tasks creatively

10.2 Methods and criteria for evaluation

Checklist for assessing the practical lesson in pharmacology

Form of control	Grade	Evaluation criteria
Prescription writing	Excellent Corresponds to ratings: A (4.0; 95-100%); A- (3.67; 90-94%)	Writes out a prescription for medicines in the most appropriate dosage form depending on age, gender, and functional characteristics. Writes out a prescription for the selected medicine without errors. Calculates doses using various methods and determines the frequency and duration of use of the medicine.
	Good Corresponds to ratings: B+ (3.33; 85-89%) B (3.0; 80-84%) B- (2.67; 75-79%) C+ (2.33; 70-74%)	Writes out a prescription for the selected medication without errors. Calculates the dose of the medicine. Limited to general indications "Internal", "External".
	Satisfactory Corresponds to ratings: C (2.0; 65-69%) C- (1.67; 60-64%) D+ (1.33; 55-59%) D- (1.0; 50-54%)	Writes out a prescription using reference literature/sources. Allows corrections to the prescription.
	Unsatisfactory FX (0.5; 25-49%) F (0; 0-24%)	Writes out a prescription with errors.
Checklist for SIWT/SIW		

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Analysis of a scientific article	Excellent corresponds to points 95-100 90-94	- independently substantiated and argued the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work; - freely presented the semantic content of the scientific article; -argued and substantiated conclusions; - had the skill of using literature and justifying the selected list of references in this article
	Good corresponds to points 85-89 80-84 75-79 70-74	- substantiated and argued the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work; - outlined the semantic content of the scientific article; -argued and substantiated conclusions; - had the skill of using literature and justifying the selected list of references in this article; - when answering, he made minor mistakes and inaccuracies
	Satisfactory corresponds to points 65-69 60-64 50-54	- found it difficult to justify and argue the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work; - had difficulty expressing the semantic content of a scientific article; - had difficulty arguing and substantiating conclusions; - had the skill of using literature and justifying the selected list of references in this article; - when answering, he made fundamental mistakes and inaccuracies
	Unsatisfactory corresponds to points 25-49	- found it difficult to justify and argue the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work; - had difficulty expressing the semantic content of a scientific article; - had difficulty arguing and substantiating conclusions; - failed to demonstrate the skill of using literature and justifying the selected list of literature in this article; - made gross mistakes when answering
	Unsatisfactory corresponds to points 0-24	- found it difficult to justify and argue the relevance of the problem; - could not explain the purpose of the work, the materials and methods used in the work; - was unable to convey the semantic content of a scientific article; - was unable to argue and justify the conclusions; - failed to demonstrate the skill of using literature and justifying the selected list of literature in this article; - made gross mistakes when answering
Discussion of the topic	Excellent corresponds to points 95-100 90-94	- did not make any mistakes during the discussion; - was oriented in the theories, concepts and directions of the discipline and gave them a critical assessment; - used scientific achievements of other disciplines
	Good corresponds to points 85-89 80-84 75-79 70-74	- during the discussion he did not make any gross mistakes, but he did make inaccuracies and minor errors, which he corrected himself; - managed to systematize the program material with the help of the teacher

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	Satisfactory corresponds to points 65-69 60-64 50-54	- made fundamental mistakes during the discussion; - limited himself to only the educational literature specified by the teacher; - experienced great difficulty in systematizing the material
	Unsatisfactory corresponds to points 25-49	- made gross mistakes during the discussion; - did not study the basic literature on the topic of the lesson; - failed to use the scientific terminology of the discipline
	Unsatisfactory corresponds to points 0-24	

Checklist for midterm assessment

Testing - testing is assessed using a multi-point knowledge assessment system.

Checklist for assessing practical skills in propaedeutics of internal diseases

Form of control	Grade	Evaluation criteria
carrying out practical work	Excellent corresponds to points 95-100 90-94	The student is well-versed in questioning and examining patients. Correctly and accurately selects questions when collecting anamnesis, accurately analyzes primary and secondary complaints, and is well-versed in the collected anamnesis of life and disease. - Accurately performs a basic physical examination (general examination, palpation, percussion, auscultation, blood pressure measurement, determination of pulse characteristics, respiratory rate, etc.) in children and adolescents. - Conducts correct linking of objective physical examination data (palpation, auscultation, percussion), correctly interprets laboratory and instrumental examination data. - Ability to evaluate pathophysiological patterns of research results. Finds and compares the connection between the main symptoms and syndromes. - Substantiates and establishes a presumptive syndrome-based diagnosis. - Used additional literature when preparing for the lesson. Systematizes the material on the given topic. - Effectively communicates in medical practice, objectively conveys relevant information, knows and uses the norms of ethics and deontology when performing the skill;
	Good corresponds to points 85-89 80-84 75-79 70-74	The student differentiates between primary and secondary complaints well, is well oriented in the collected anamnesis of life and disease. Is well oriented when questioning and examining patients, but allows minor inaccuracies or fundamental errors, corrected by the student himself. - Accurately performs a basic physical examination: general examination, palpation, percussion, auscultation, blood pressure measurement, determination of pulse characteristics, respiratory rate, etc. of children and adolescents. Incapable of correctly interpreting examination results. Does not accurately convey appropriate information; - Links data from objective physical examination (palpation, auscultation, percussion), and incorrectly interprets data from laboratory and instrumental studies. - Has errors in assessing pathophysiological patterns based on research results. Finds and compares the relationship between the main symptoms and syndromes. Establishes a presumptive syndrome-based

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		diagnosis without substantiating the data
	Satisfactory corresponds to points 65-69 60-64 50-54	- The student is able to navigate when questioning and examining patients, <u>differentiates</u> between primary and secondary complaints with errors, and is poorly <u>oriented</u> in the collected anamnesis of life and illness. - Makes mistakes when conducting a physical examination (palpation, percussion, auscultation and general examination) and demonstrates incomplete knowledge of the material on a given topic, while making fundamental mistakes. - <u>Links</u> data from objective physical examination (palpation, auscultation, percussion), correctly <u>interprets</u> data from laboratory and instrumental studies. Has errors in assessing examination results. - Is unable to <u>evaluate</u> pathophysiological patterns of research results. <u>Is unable to determine</u> the relationships between the main symptoms and syndromes. <u>Establishes</u> a presumptive syndrome-based diagnosis without substantiating the data. - Has a low level of communication skills in medical practice; <u>subjectively conveys appropriate information</u>;
	Unsatisfactory corresponds to points 25-49	- The student has no idea about the main and secondary complaints, and is not <u>oriented</u> in the collected anamnesis of life and illness. - Is unable to carry out practical skills to interpret their results. <u>Cannot determine the relationship of</u> objective physical examination data (palpation, auscultation, percussion), incorrectly <u>interprets</u> laboratory and instrumental examination data. - Does not know how to <u>evaluate</u> pathophysiological patterns of research results. <u>Does not find and is not able to compare</u> the relationship between the main symptoms and syndromes. Establishes a presumptive syndrome-based diagnosis without substantiating the data - Does not participate in the work of the group. Is not able to communicate in medical practice; does not convey proper information, does not know and is not able to use the norms of ethics and deontology when performing the skill. When answering the teacher's questions, gross errors, not using specific terminology in answers.
Case study	Excellent corresponds to points 95-100 90-94	- solved cases within a certain time; - gave full answers to all questions Demonstrates original thinking when analyzing a situational task. Fully utilizes theoretical knowledge necessary to solve a given task. Demonstrates excellent knowledge of reference biochemical parameters when interpreting the proposed biofluid analysis data. Demonstrates the ability to draw logical conclusions on a situational task, while demonstrating a deep understanding of the necessary educational material.
	Good corresponds to points 85-89 80-84 75-79 70-74	- solved cases within a certain time; - gave complete answers to all questions; - made minor mistakes when solving cases Possesses the necessary knowledge to solve this situational task. Allows for minor inaccuracies when discussing this case. Is able to draw correct conclusions on the proposed situational task.

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	Satisfactory corresponds to points 65-69 60-64 50-54	- solved cases within a certain time; - gave incomplete answers to questions; - made fundamental mistakes when solving cases Allows minor inaccuracies when discussing a given task, has difficulty interpreting analyses proposed in a situational task. Draws conclusions with difficulty
	Unsatisfactory corresponds to points 25-49	- solved cases incorrectly or did not solve them at all; - made gross mistakes when solving cases Allows fundamental errors in discussing a situational task. Passive, unable to draw appropriate conclusions.
	Unsatisfactory corresponds to points 0-24	
Interpretation of clinical laboratory test results	Excellent corresponds to points 95-100 90-94	- correctly, without any errors, interpreted the results of clinical laboratory tests; - made a reasoned conclusion
	Good corresponds to points 85-89 80-84 75-79 70-74	- correctly interpreted the results of clinical laboratory tests, making minor errors; - made a reasoned conclusion
	Satisfactory corresponds to points 65-69 60-64 50-54	- correctly interpreted the results of clinical laboratory studies, having made fundamental mistakes; - made an unfounded conclusion
	Unsatisfactory corresponds to points 25-49	- incorrectly interpreted the results of clinical laboratory tests, making gross errors; - did not draw a conclusion
	Unsatisfactory corresponds to points 0-24	
Discussion of the topic	Excellent corresponds to points 95-100 90-94	- did not make any mistakes during the discussion; - was oriented in the theories, concepts and directions of the discipline and gave them a critical assessment; - used scientific achievements of other disciplines
	Good corresponds to points 85-89 80-84 75-79 70-74	- during the discussion he did not make any gross mistakes, but he did make inaccuracies and minor errors, which he corrected himself; - managed to systematize the program material with the help of the teacher
	Satisfactory corresponds to points 65-69 60-64 50-54	- made fundamental mistakes during the discussion; - limited himself to only the educational literature specified by the teacher; - experienced great difficulty in systematizing the material
	Unsatisfactory corresponds to points 25-49	- made gross mistakes during the discussion; - did not study the basic literature on the topic of the lesson; - failed to use the scientific terminology of the discipline
	Unsatisfactory	

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	corresponds to points 0-24			
	Unsatisfactory corresponds to points 0-24			
Checklist for assessing the analysis of scientific articles				
Score in points by %	Unsatisfactory (0-49%)	Satisfactory (50-69%)	Good (70-89%)	Excellent (90-100%)
Evaluation criteria				
Structure of the article	1. Does not name the structural components of a scientific article	1. Does not follow the order of the structure of the scientific article when listing, skips components	1. Lists the structural components of a scientific article, but violates the order of the structure	1. Observes the order of the structure of a scientific article when listing: - Name - Authors - Publishing house - Summary - General part (introduction, purpose, materials and methods, results and discussion) - Conclusions - Bibliography
Analysis of the content of a scientific article	1. Does not understand the relevance of the problem, is not capable of discussing the content of the article	1. Understands the relevance of the problem 2. Lists the purpose of the work, the materials and methods used in the work 3. Understands the content of a scientific article 4. Lists the conclusions and bibliography in this article	1. Assumes the relevance of the problem 2. Explains the purpose of the work, the materials used in the work and methods presents the content of a scientific article 3. Justifies the conclusions 4. Justifies the selected list of references in this article	1. Independently substantiates and argues the relevance of the problem 2. Explains the purpose of the work, the materials and methods used in the work 3. Freely expresses the semantic content of a scientific article 4. Argues and justifies conclusions 5. Has the skill of using literature and justifies the selected list of literature in this article
Answer to additional questions (on the topic of the article for the discipline)	1. Does not answer additional questions on the topic	1. Does not understand the problem at hand when answering additional questions	1. Apply the knowledge gained during the practical lesson on the topic when answering additional questions	1. Applies the knowledge gained during the practical lesson on the topic when answering additional questions, provides a deep and comprehensive argumentation
Checklists for the discipline of pathological physiology				
Checklist for training cases	Excellent corresponds to points 95-100 90-94	- solved cases within a certain time; - gave full answers to all questions Demonstrates original thinking when analyzing a situational task. Fully utilizes theoretical knowledge necessary to solve a given task.		

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		Demonstrates excellent knowledge of reference biochemical parameters when interpreting the proposed biofluid analysis data. Demonstrates the ability to draw logical conclusions on a situational task, while demonstrating a deep understanding of the necessary educational material.
	Good corresponds to points 85-89 80-84 75-79 70-74	- solved cases within a certain time; - gave complete answers to all questions; - made minor mistakes when solving cases Possesses the necessary knowledge to solve this situational task. Allows for minor inaccuracies when discussing this case. Is able to draw correct conclusions on the proposed situational task.
	Satisfactory corresponds to points 65-69 60-64 50-54	- solved cases within a certain time; - gave incomplete answers to questions; - made fundamental mistakes when solving cases Allows minor inaccuracies when discussing a given task, has difficulty interpreting analyses proposed in a situational task. Draws conclusions with difficulty
	Unsatisfactory corresponds to points 25-49	- solved cases incorrectly or did not solve them at all; - made gross mistakes when solving cases Allows fundamental errors in discussing a situational task. Passive, unable to draw appropriate conclusions.
	Unsatisfactory corresponds to points 0-24	
Interpretation of clinical laboratory test results	Excellent corresponds to points 95-100 90-94	- correctly, without any errors, interpreted the results of clinical laboratory tests; - made a reasoned conclusion
	Good corresponds to points 85-89 80-84 75-79 70-74	- correctly interpreted the results of clinical laboratory tests, making minor errors; - made a reasoned conclusion
	Satisfactory corresponds to points 65-69 60-64 50-54	- correctly interpreted the results of clinical laboratory studies, having made fundamental mistakes; - made an unfounded conclusion
	Unsatisfactory corresponds to points 25-49	- incorrectly interpreted the results of clinical laboratory tests, making gross errors; - did not draw a conclusion
	Unsatisfactory corresponds to points 0-24	
Checklists for the discipline pathological anatomy		

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Checklist for practical lesson		
Form of control	Grade	Evaluation criteria
Case study	Excellent corresponds to points 95-100 90-94	- solved cases within a certain time; - gave full answers to all questions Demonstrates original thinking when analyzing a situational task. Fully utilizes the theoretical knowledge necessary to solve a given task. Demonstrates the ability to draw logical conclusions on a situational task, while demonstrating a deep understanding of the necessary educational material.
	Good corresponds to points 85-89	- solved cases within a certain time; - gave complete answers to all questions; - made minor mistakes when solving cases
	80-84	- solved cases within a certain time; - gave complete answers to all questions; - made minor mistakes when solving cases Possesses the necessary knowledge to solve this situational problem. Allows for minor inaccuracies when discussing this case.
	75-79	- solved cases within a certain time; - made minor mistakes when solving cases Possesses the necessary knowledge to solve this situational task. Allows for minor inaccuracies when discussing this case. Is able to draw correct conclusions on the proposed situational task.
	70-74	- solved cases within a certain time; - made fundamental mistakes when solving cases Possesses the necessary knowledge to solve the given situational task. Allows minor inaccuracies when discussing the given case. Is able to draw minor conclusions on the proposed situational task.
	Satisfactorily corresponds to points 65-69	- solved cases within a certain time; - gave incomplete answers to questions; - made fundamental mistakes when solving cases

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	60-64	- solved cases within a certain time; - gave incomplete answers to questions; - made fundamental mistakes when solving cases Allows for minor inaccuracies when discussing a given task, has difficulty interpreting the analyses proposed in a situational task	
	50-54	- solved cases within a certain time; - gave incomplete answers to questions; - made fundamental mistakes when solving cases Allows minor inaccuracies when discussing a given task, has difficulty interpreting analyses proposed in a situational task. Draws conclusions with difficulty	
	Unsatisfactory corresponds to points 25-49	- solved cases incorrectly or did not solve them at all; - made gross mistakes when solving cases	
	Unsatisfactory corresponds to points 0-24	- solved cases incorrectly or did not solve them at all; - made gross mistakes when solving cases Allows fundamental errors in discussing a situational task. Passive, unable to draw appropriate conclusions.	
Description of the macropreparation	"Excellent" corresponds to points 95-100	-correctly named the organ, indicated the dimensions, - described the surface: the condition of the capsule or serous membrane, dullness, shine, overlap; - gave a description of the pathological focus: indicated the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; -made the correct pathological conclusion/diagnosis	

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	90-94	-correctly named the organ, indicated the dimensions, - described the surface: the condition of the capsule or serous membrane, dullness, shine, overlap; - gave a description of the pathological focus: indicated the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; - -made a minor mistake -made the correct pathological conclusion/diagnosis	
	"Good" corresponds to points 85-89	- correctly named the organ, indicated the dimensions, described the surface: condition of the capsule or serous membrane, dullness, shine, overlap; - gave a description of the pathological focus: indicated the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; - made the correct pathological conclusion/diagnosis, but during the answer made 1 non-fundamental mistakes and inaccuracies	
	80-84	correctly named the organ, indicated the dimensions, described the surface: condition of the capsule or serous membrane, dullness, shine, overlap; - gave a description of the pathological focus: indicated the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; -made the correct pathological conclusion/diagnosis, but during the answer made 2 non-fundamental mistakes and inaccuracies	
	75-79	correctly named the organ, indicated the dimensions, described the surface: condition of the capsule or serous membrane, dullness, shine, overlap; - gave a description of the pathological focus:	

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		indicated the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; -made the correct pathological conclusion/diagnosis, but during the answer made 3 non-fundamental mistakes and inaccuracies	
	70-74	correctly named the organ, indicated the dimensions, described the surface: condition of the capsule or serous membrane, dullness, shine, overlap; - gave a description of the pathological focus: indicated the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; -made the correct pathological conclusion/diagnosis, but during the answer made 4 non-fundamental mistakes and inaccuracies	
	"Satisfactorily" corresponds to points 65-69	- correctly named the organ, did not indicate the dimensions, did not fully describe the surface: did not describe the condition of the capsule or serous membrane, dullness, shine, overlap; - gave an incomplete description of the pathological focus: indicated the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; -made the correct pathological conclusion/diagnosis, but during the answer made 1- fundamental errors and inaccuracies	
	60-64	- correctly named the organ, did not indicate the dimensions, did not fully describe the surface: did not describe the condition of the capsule or serous membrane, dullness, shine, overlap; - gave an incomplete description of the pathological focus: indicated the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; -made the correct pathological conclusion/diagnosis, but during the answer made 2- fundamental errors and inaccuracies	

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Description of the microslide	50-54	correctly named the organ, did not indicate the dimensions, did not fully describe the surface: did not describe the condition of the capsule or serous membrane, dullness, shine, overlap; - gave an incomplete description of the pathological focus: indicated the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; -made the correct pathological conclusion/diagnosis, but during the answer made 3- fundamental errors and inaccuracies	
	"Unsatisfactory" corresponds to points 25-49	- correctly named the organ, did not indicate the size, did not describe the surface: did not describe the condition of the capsule or serous membrane, dullness, shine, overlap; - gave an incorrect description of the pathological focus: did not indicate the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; - made the correct pathological conclusion/ diagnosis, but during the answer made fundamental mistakes and inaccuracies	
	"Unsatisfactory" corresponds to points 0-24	- incorrectly named the organ, did not indicate the size, did not describe the surface: did not describe the condition of the capsule or serous membrane, dullness, shine, overlap; - gave an incorrect description of the pathological focus: did not indicate the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency; - made an incorrect pathological conclusion/diagnosis, made gross errors during the answer, left some questions unanswered	
	"Excellent" corresponds to points 95-100	-correctly named the organ or tissue, correctly characterized pathological changes: localization, made	

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		a description, named the color; -made the correct pathological conclusion/diagnosis	
	90-94	correctly named the organ or tissue, correctly characterized pathological changes: localization, made a description, named the color; -made the correct pathological conclusion/diagnosis -made a minor mistake	
	"Good" corresponds to points 85-89	-correctly named the organ or tissue, correctly characterized pathological changes: localization, made a description, named the color; -made the correct pathological conclusion/diagnosis, but during the answer made 1- non-fundamental errors and inaccuracies	
	80-84	-correctly named the organ or tissue, correctly characterized pathological changes: localization, made a description, named the color; -made the correct pathological conclusion/diagnosis, but during the answer made 2- non-fundamental errors and inaccuracies	
	75-79	-correctly named the organ or tissue, correctly characterized pathological changes: localization, made a description, named the color; -made the correct pathological conclusion/diagnosis, but during the answer made 3- non-fundamental errors and inaccuracies	
	70-74	-correctly named the organ or tissue, correctly characterized pathological changes: localization, made a description, named the color; -made the correct pathological conclusion/diagnosis, but during the answer made 4- non-fundamental errors and inaccuracies	

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	"Satisfactorily" corresponds to points 65-69	- correctly named an organ or tissue, incorrectly characterized pathological changes: localization, made a description, incorrectly named the color; -made the correct pathological conclusion/diagnosis, but during the answer made 1- fundamental errors and inaccuracies	
	60-64	- correctly named an organ or tissue, incorrectly characterized pathological changes: localization, made a description, incorrectly named the color; -made the correct pathological conclusion/diagnosis, but during the answer made 2- fundamental errors and inaccuracies	
	50-54	- correctly named an organ or tissue, incorrectly characterized pathological changes: localization, made a description, incorrectly named the color; -made the correct pathological conclusion/diagnosis, but during the answer made 3- fundamental errors and inaccuracies	
	"Unsatisfactory" corresponds to points 25-49	- correctly named an organ or tissue, incorrectly characterized pathological changes: localization, made a description, incorrectly named the color; -made the correct pathological conclusion/diagnosis, made gross errors during the answer	
	"Unsatisfactory" corresponds to points 0-24	- incorrectly named an organ or tissue, incorrectly characterized pathological changes: localization, made a description, incorrectly named the color; - made an incorrect pathological conclusion/diagnosis, made gross mistakes during the answer, left some questions unanswered	
Discussion of the topic	Excellent corresponds to points 95-100	- did not make any mistakes during the discussion; - was oriented in the theories, concepts and directions of the discipline and gave them a critical assessment; - used scientific achievements of other disciplines	

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	90-94	- did not make any mistakes during the discussion; - was oriented in the theories, concepts and directions of the discipline and gave them a critical assessment; - used scientific achievements of other disciplines -made a minor mistake	
	Good corresponds to points 85-89	- during the discussion he did not make any serious mistakes, but he made 1-inaccuracies and minor errors, which he corrected himself; - managed to systematize the program material with the help of the teacher	
	80-84	- during the discussion he did not make any serious mistakes, but he made 2-inaccuracies and minor errors, which he corrected himself; - managed to systematize the program material with the help of the teacher	
	75-79	- during the discussion he did not make any serious mistakes, but he made 3-inaccuracies and minor errors, which he corrected himself; - managed to systematize the program material with the help of the teacher	
	70-74	- during the discussion he did not make any serious mistakes, but he made 4-inaccuracies and minor errors, which he corrected himself; - managed to systematize the program material with the help of the teacher	
	Satisfactorily corresponds to points 65-69	- during the discussion, he made 1 fundamental mistakes; - limited himself to only the educational literature specified by the teacher; - experienced great difficulty in systematizing the material	
	60-64	- during the discussion, he made 2 fundamental mistakes; - limited himself to only the educational literature specified by the teacher; - experienced great difficulty in systematizing the material	
	50-54	- during the discussion, he made 3 fundamental mistakes; - limited himself to only the educational literature specified by the teacher;	

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		- experienced great difficulty in systematizing the material
	Unsatisfactory corresponds to points 25-49	- made gross mistakes during the discussion; - did not study the basic literature on the topic of the lesson; - failed to use the scientific terminology of the discipline
	Unsatisfactory corresponds to points 0-24	- found it difficult to answer; - did not study the basic literature on the topic of the lesson; - failed to use the scientific terminology of the discipline

Checklist for SIWT/SIW

Ana lysis of a scie ntifi c artic le	Excellent corresponds to points 95-100 90-94	- independently substantiated and argued the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work; - freely presented the semantic content of the scientific article; - argued and substantiated conclusions; - had the skill of using literature and justifying the selected list of references in this article
	Good corresponds to points 85-89 80-84 75-79 70-74	- substantiated and argued the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work; - outlined the semantic content of the scientific article; - argued and substantiated conclusions; - had the skill of using literature and justifying the selected list of references in this article; - when answering, he made minor mistakes and inaccuracies
	Satisfactorily corresponds to points 65-69 60-64 50-54	- found it difficult to justify and argue the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work; - had difficulty expressing the semantic content of a scientific article; - had difficulty arguing and substantiating conclusions; - had the skill of using literature and justifying the selected list of references in this article; - when answering, he made fundamental mistakes and inaccuracies
	Unsatisfactory corresponds to points 25-49	- found it difficult to justify and argue the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work;

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		- had difficulty expressing the semantic content of a scientific article; - had difficulty arguing and substantiating conclusions; - failed to demonstrate the skill of using literature and justifying the selected list of literature in this article; - made gross mistakes when answering			
	Unsatisfactory corresponds to points 0-24	- found it difficult to justify and argue the relevance of the problem; - could not explain the purpose of the work, the materials and methods used in the work; - was unable to convey the semantic content of a scientific article; - was unable to argue and justify the conclusions; - failed to demonstrate the skill of using literature and justifying the selected list of literature in this article; - made gross mistakes when answering			
Discussion of the topic	Excellent corresponds to points 95-100 90-94	- did not make any mistakes during the discussion; - was oriented in the theories, concepts and directions of the discipline and gave them a critical assessment; - used scientific achievements of other disciplines			
	Good corresponds to points 85-89 80-84 75-79 70-74	- during the discussion he did not make any gross mistakes, but he did make inaccuracies and minor errors, which he corrected himself; - managed to systematize the program material with the help of the teacher			
	Satisfactorily corresponds to points 65-69 60-64 50-54	- made fundamental mistakes during the discussion; - limited himself to only the educational literature specified by the teacher; - experienced great difficulty in systematizing the material			
	Unsatisfactory corresponds to points 25-49	- made gross mistakes during the discussion; - did not study the basic literature on the topic of the lesson; - failed to use the scientific terminology of the discipline			
	Unsatisfactory corresponds to points 0-24				
	Checklist of SIWT and SIW for the discipline of pathological anatomy				
Checklist for assessing responses to the description of a macroscopic preparation in a case					
N o.	Evaluation Criteria/Evaluation	Excellent	Good	Satisfactorily	Unsatisfactory
1	Name of the organ	5.0-4.0	3.9-3.0	2.9-2.0	1.9-0
2	Organ size	5.0-4.0	3.9-3.0	2.9-2.0	1.9-0
3	Surface: condition of the capsule or serous membrane, dullness, shine, superposition	10.0-9.0	8.9-7.0	6.9-5.0	4.9-0

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4	Characteristics of the pathological focus: Localization, size, shape (if an ulcer – condition of the bottom), color, consistency	20.0-19.0	18.9-15.0	14.9-11.0	10.9-0
5	Pathological diagnosis/conclusion	10.0-9.0	8.9-7.0	6.9-5.0	4.9-0
6	Total	50.0-45.0	44.5-35.0	34.5-25.0	24.5-0

Checklist for assessing responses to the description of a microscopic specimen in a case study

N o.	Evaluation Criteria/Evaluation	Excellent	Good	Satisfactorily	Unsatisfactory
1	Name of an organ or tissue	10.0-9.0	8.9-7.0	6.9-5.0	4.9-0
2	Characteristics of pathological changes: localization, description	25.0-23.0	22.9-20.0	19.9-15.0	14.9-0
3	Coloring	5.0-4.0	3.9-3.0	2.9-2.0	1.9-0
4	Pathological diagnosis/conclusion	10.0-9.0	8.8-5.0	4.8-3.0	2.8-0
5	Total	50.0-45.0	44.5-35.0	34.5-25	24.5-0

Checklist for midterm assessment

Testing - testing is assessed using a multi-point knowledge assessment system.

Multi-point knowledge assessment system

Letter Grading	Digital equivalent of points	Percentage content	Traditional system assessment
A	4.0	95-100	Excellent
A -	3.67	90-94	
B +	3.33	85-89	Good
B	3.0	80-84	
B -	2.67	75-79	Satisfactory
C +	2.33	70-74	
C	2.0	65-69	Unsatisfactory
C -	1.67	60-64	
D+	1.33	55-59	
D-	1.0	50-54	
FX	0.5	25-49	
F	0	0-24	

11. Learning Resources

Electronic Resources

Электронная библиотека ЮКМА - <https://e-lib.skma.edu.kz/genres>

Республиканская межвузовская электронная библиотека (РМЭБ) – <http://rmebrk.kz/>

Цифровая библиотека «Аknurpress» - <https://www.aknurpress.kz/>

Электронная библиотека «Эпиграф» - <http://www.elib.kz/>

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Эпиграф - портал мультимедийных учебников <https://mbook.kz/ru/index/>

ЭБС IPR SMART <https://www.iprbookshop.ru/auth>

информационно-правовая система «Заң» - <https://zan.kz/ru>

Medline Ultimate EBSCO

eBook Medical Collection EBSCO

Scopus - <https://www.scopus.com/>

Electronic Textbooks

Propaedeutics of Internal Diseases

- 1) Внутренние болезни. Т. 1 [Электронный ресурс]: учебник / под ред. В. С. Моисеева. - 3-е изд., испр. и доп. - Электрон. текстовые дан. (66.5Мб). - М.: ГЭОТАР - Медиа, 2015. - 960
- 2) Внутренние болезни. Т. 2 [Электронный ресурс]: учебник / под ред. В. С. Моисеева. - 3-е изд., испр. и доп. - Электрон. текстовые дан. (45.1Мб). - М.: ГЭОТАР - Медиа, 2015. -895
- 3) Пропедевтика внутренних болезней : Учебник. / Т.С. Рябова, Е.С. Рысс, В.Я. Плоткин и др.. - СПб.:СпецЛит, 2015. - 414 с. <http://rmebrk.kz/book/1174389>
- 4) Внутренние болезни в работе врача общей практики :Учебное пособие. / К.Ж. Садыкова, Ш.У. Скендерова, С.К. Саттиева. - Туркестан: Туран, 2017. - 96 с. <http://rmebrk.kz/book/1167635>
- 5) Пропедевтика внутренних болезней: Учебник. – 6-е изд., I - том перераб. и доп. – Алматы: Эверо, 2020. – 400 с. https://elibr.kz/ru/search/read_book/676/
- 6) Пропедевтика внутренних болезней: Учебник. – 6-е изд., II - том перераб. и доп. (Учеб. лит. Для студентов медицинских вузов).– Алматы: Эверо, 2020. – 212 с https://elibr.kz/ru/search/read_book/682
- 7) Пропедевтика внутренних болезней: Учебник. – 6-е изд., III – том перераб. и доп. (Учеб. лит. Для студентов медицинских вузов). – Алматы: Эверо, 2020. – 208 с.https://elibr.kz/ru/search/read_book/684/
- 8) Нұрсұлтанова С.Д., Бакирова Р.Е., Мамашалиева С.Б., Беков Е.К., Мадиева Л.С. Жүрек тамыр жүйесінің аурулары бар науқастарды тексеру әдісі және техникасы. Оқу-әдістемелік құрал.- Алматы, «Эверо» баспасы. -2020. https://elibr.kz/ru/search/read_book/705/
- 9) Ішкі ағза ауруларының пропедевтикасы. Оқулық Айтмбет Б.11- Алматы «Эверо» 2018ж,-568 бет. https://elibr.kz/ru/search/read_book/3086/
- 10) Стрюк, Раиса Ивановна. Внутренние болезни: в 3 ч. : Ч. 1учебник / Р. И. Стрюк, И. В. Маев; [Перв. Моск. гос. мед. ун-т им. И. М. Сеченова]. - Алматы: Эверо, 2016. - URL: https://elibr.kz/ru/search/read_book/2766/.
- 11) Стрюк, Раиса Ивановна. Внутренние болезни: в 3 ч.: Ч. 2учебник / Р. И. Стрюк, И. В. Маев - Алматы: Эверо, 2016. - URL: https://elibr.kz/ru/search/read_book/2767/
- 12) Стрюк, Раиса Ивановна. Внутренние болезни: в 3 ч.: Ч. 3учебник / Р. И. Стрюк, И. В. Маев. - Алматы : Эверо, 2016. – URL: https://elibr.kz/ru/search/read_book/2768/
- 13) Пименов, Ю. С. Внутренние болезни. Том 1: учебное пособие / Ю. С. Пименов, И. В. Роганова, Л. Н. Финько. — Москва: РЕАВИЗ, 2008. — 146 с. / Цифровой образовательный ресурс IPR SMART: <https://www.iprbookshop.ru/10141.html>
- 14) Роганова, И. В. Внутренние болезни. Том 2: учебное пособие / И. В. Роганова, В. Ф. Роганов, И. О. Прохоренко. — Москва : РЕАВИЗ, 2008. — 132 с. / Цифровой образовательный ресурс IPR SMART: <https://www.iprbookshop.ru/10142.html>
- 15) Клинические задачи по внутренним болезням: учебное пособие / Р. И. Сайфутдинов, Л. К. Козлова, О. В. Бугрова [и др.]. — Оренбург: Оренбургская государственная медицинская академия, 2012. — 152 с. -URL: <https://www.iprbookshop.ru/21817.html>

1.Pathological Physiology:

2. Патологиялық физиология. Тәжірибелік сабақтарға нұсқау [Электронный ресурс] : оқу құралы = Патофизиология. Руководство к практическим занятиям : учебное пособие / қаз. тіліне ауд. С. Б. Жәутікова ; ред. В. В. Новицкий. - Электрон. текстовые дан. (63,4Мб). - М. : ГЭОТАР - Медиа, 2014. - 768 бет. эл. опт. диск (CD-ROM)
3. Патологиялық физиология. Досжанова М.П. , – Алматы: Эверо, 2015 ЦБ Aknurpress / <https://www.aknurpress.kz/reader/web/2476>
4. Кравцов В.И и др. Тестовые задания по патологической физиологии с элементами профилизации / Под ред.профессора В.И. Кравцов.- .Алматы: Эверо,2020. - 116 с.https://www.elibr.kz/ru/search/read_book/472/
5. Кравцов В.И и др. Тестовые задания по патологической физиологии с элементами профилизации / Под ред. профессора В.И. Кравцов.- .Алматы: Эверо,2020. - 128 с.https://www.elibr.kz/ru/search/read_book/471/
6. Кравцов В.И и др. Тестовые задания по патологической физиологии с элементами профилизации / Под ред.профессора В.И. Кравцов.- .Алматы: Эверо,2020. - 104 с. https://www.elibr.kz/ru/search/read_book/473/
7. Патологиялық физиология: 2 том. Оқулық/қазақ тіліне аударған, жауапты редактор Ж.Б. Ахметов. , – Алматы: Эверо, 2020 - 200 https://www.elibr.kz/ru/search/read_book/91/
8. Патологиялық физиология: 1 том. Оқулық/қазақ тіліне аударған, жауапты редактор Ж.Б.Ахметов., – Алматы: Эверо, 2020 - 240 с https://www.elibr.kz/ru/search/read_book/88/

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9. Патологическая физиология: Учебник для медицинских вузов. 2 том. Алматы: Эверо, 2020 – 216
https://www.elib.kz/ru/search/read_book/98/
10. Адо А.Д., Адо М.Л., Пыцкого В.И., Порядина Г. В., Владимирова Ю.Л. Патологическая физиология: учебник для медицинских вузов. 1 том. Алматы: Эверо, 2020 - 248 с. https://www.elib.kz/ru/search/read_book/96/
11. Адо А.Д., Адо М.Л., Пыцкого В.И., Порядина Г. В., Владимирова Ю.Л. Патологическая физиология: Учебник для медицинских вузов. 3 том. Алматы: Эверо, 2020 https://www.elib.kz/ru/search/read_book/100/
12. Уразалин. Тест тапсырмалары, Профилизация элементтерімен бірге патологиялық физиология, бойынша мамандықтар: 051301-жалпы медицина, 051302-стоматология. III-бөлім. Гемостаз қан жүйесінің, қанайналым және тынысалу жүйелерінің патофизиологиясы. Алматы, «Эверо» баспасы, 2020 ж., 142 б. https://www.elib.kz/ru/search/read_book/896/
13. Уразалин. Тест тапсырмалары. Профилизация элементтерімен бірге патологиялық физиология, Бойынша мамандықтар: 051301-жалпы медицина, 051302-стоматология. II-бөлім. Типтік патологиялық процестер, Біртектес дерттік үрдістер. Алматы, «Эверо» баспасы, 2020 ж., 184 б. https://www.elib.kz/ru/search/read_book/895/
14. Уразалин. Тест тапсырмалары, Профилизация элементтерімен бірге патологиялық физиология, Бойынша мамандықтар: 051301-жалпы медицина, 051302-стоматология. IV-бөлім. Асқорыту, бауыр, бүйрек, эндокриндік және жүйке жүйелерінің патофизиологиясы. Алматы, «Эверо» баспасы, 2020 ж., 204 б. https://www.elib.kz/ru/search/read_book/897/
15. Адо А.Д., Адо М.Л., Пыцкого В.И., Порядина Г. В., Владимирова Ю.Л. Патологиялық физиология: 3 том. Оқулық/қазақ тіліне аударған, жауапты редактор Ж.Б. Ахметов. – Алматы: Эверо, 2020 – 344 https://www.elib.kz/ru/search/read_book/94/
16. Анатомия, физиология, патология органов слуха, речи, зрения. Ахметова Н.Ш., – Алматы: Эверо, 2019 ЦБ Aknurpress / <https://www.aknurpress.kz/reader/web/1016>
17. Мамандандырылған патологиялық физиология курсы. Жәутікова С.Б., Өмірбаева Е.К., – Алматы: Эверо, 2019 ЦБ Aknurpress / <https://www.aknurpress.kz/reader/web/1449>
18. Коган, Б. М. Анатомия, физиология и патология сенсорных систем : учебное пособие / Б. М. Коган, К.В. Машилов. — Москва : Аспект Пресс, 2011. — 384 с. <https://www.iprbookshop.ru/8873.html>
19. Герасимова, О. В. Патология основных систем жизнеобеспечения. Том 1 : учебное пособие / О. В. Герасимова. — Самара : РЕАВИЗ, 2009. — 143 с. — <https://www.iprbookshop.ru/10144.html>
20. Патологическая физиология: теоретический курс = Pathological physiology: theoretical course : учебное пособие / Е. В. Куликов, Ю. А. Ватников, В. И. Паршина, В. М. Бяхова. — Москва : Российский университет дружбы народов, 2018. — 92 с. <https://www.iprbookshop.ru/91045.html>
21. Examination Tests From Pathological Physiology Učební Texty Univerzity Karlovy V Praze, 2015 eBook Collection (EBSCOhost) First edition. Prague : Charles University in Prague, Karolinum Press. 2015// eBook Collection EBSCO
22. Pathophysiology of Oral Diseases Dental Science, Materials and Technology, 2016 eBook Collection (EBSCOhost) Namboodiripad, P. C. Anila; Anuradha Sunil, E. Hauppauge, New York : Nova Science Publishers, Inc. 2016// eBook Collection EBSCO
- 1. Pathological Anatomy**
2. Патологическая анатомия [Электронный ресурс] : атлас: учеб. пособие для студентов мед. вузов и последипломного образования / под ред. О. В. Зайратьянц. - Электрон. текстовые дан. (240 Мб). - М. : ГЭОТАР - Медиа, 2012. - 960 с. эл. опт. диск (CD-ROM). - (Электронный учебник).
3. Патологическая анатомия [Электронный ресурс] : национальное рук. / гл. ред. М. А. Пальцева. - М. : ГЭОТАР - Медиа, 2013. - 1264 с
4. Тусупбекова, М. М. Морфологический атлас общепатологических процессов [Электронный ресурс] : учебник / М. М. Тусупбекова. - Электрон. текстовые дан. (1.03 Гб). - Алматы : Эпиграф, 2016. -
5. Струков, А. И. Патологическая анатомия [Электронный ресурс]: учебник - М. : ГЭОТАР - Медиа, 2013
6. Кисманова Г.Н. Жалпы патологиялық процестер нұсқауы. Оқулық. - Алматы: Эверо, 2020. – 92 бет Эпиграф
7. https://www.elib.kz/ru/search/read_book/861/
8. Несеп-жыныс ағзаларының анатомиясы. Ахмад Н.С., – Алматы: Эверо, 2020 ЦБ Aknurpress / <https://www.aknurpress.kz/reader/web/2357>
9. Патологиялық анатомия Ахметов Ж.Б., 2021. <https://aknurpress.kz/reader/web/2423>
10. Ахметов Ж. Б. Патологиялық анатомия – Оқулық. 1 том. Алматы: Эверо, 2020 ж. - 360 бет. https://elib.kz/ru/search/read_book/144/
11. Ахметов Ж. Б. Патологиялық анатомия – Оқулық. 2 том. Алматы: Эверо, 2020 ж. - 344 бет. https://elib.kz/ru/search/read_book/141/
12. Ахметова Н.Ш. Анатомия, физиология, патология органов слуха, речи,
13. зрения: учебное пособие (3-е издание). Караганда: Издательство
14. «АҚНҰР», 2021. - 192 с. <https://aknurpress.kz/reader/web/1016>
15. Поморгайло, Е. Г. Диагностика общепатологических процессов глазами студента 3 курса. Часть 1. Общая патологическая анатомия : учебное пособие / Е. Г. Поморгайло, М. В. Маркелова ; под редакцией Е. В. Лопанова, А. В. Кононов. — Саратов : Ай Пи Эр Медиа, 2018. — 77 с. -
16. Чернобай, Г. Н. Патологическая анатомия орофациальной области, головы и шеи : учебное пособие / Г. Н. Чернобай.

ONTÜSTİK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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- Кемерово : Кемеровская государственная медицинская академия, 2011. — 122 с. - <https://www.iprbookshop.ru/6074.html>
17. Демко, П. С. Руководство к самостоятельной внеаудиторной подготовке студентов к практическим занятиям по курсу общей патологической анатомии / П. С. Демко, О. Д. Сидорова, Г. Н. Чернобай. — Кемерово : Кемеровская государственная медицинская академия, 2009. — 124 с. -<https://www.iprbookshop.ru/6211.html>
18. Недзведь, М. К. Патологическая анатомия и патологическая физиология : учебник. — Минск :Вышэйшая школа, 2010. — 272 с. // ЦОР IPR SMART : [сайт]. — URL: <https://www.iprbookshop.ru/20116.html>
19. Практикум по общему курсу патологической анатомии : учебное пособие / составители В. С. Полякова [и др.], под редакцией В. С. Полякова. — Оренбург : Оренбургская государственная медицинская академия, 2011. — 193 с. - : <https://www.iprbookshop.ru/31850.html>
20. Чернобай, Г. Н. Частная патологическая анатомия : учебное пособие. — Кемерово : Кемеровская государственная медицинская академия, 2011. — 236 с. - <https://www.iprbookshop.ru/6095.html>
21. Патологиялық проц. мен аурулардың морф. көріністерінің салыст. сипаттамасы. Манекенова К.Б., Омаров Т.М., Досмамбетова Ж.Қ., Смайлова Г.Қ., Дүкенбаева Б.А. , 2019 ЦБ Aknurpress
22. <https://www.aknurpress.kz/reader/web/1452>
23. Түсіпбекова М.М.Клиникалық патоморфология / М.М.Түсіпбекова. –Алматы: «Эверо» баспасы, 2020.-188 б Эпиграф
24. https://www.elib.kz/ru/search/read_book/462/
25. Дүкенбаева Б.А.Жалпы патологиялық анатомияның екінші бөлімі: «Қанайналым бұзылыстары». – Оқу құралы. Алматы: Эверо, 2020. – 120 б Эпиграфhttps://www.elib.kz/ru/search/read_book/4197/
26. Кисманова Г.Н.Жалпы патологиялық процестер нұсқауы. Оқулық.- Алматы: Эверо, 2020. – 92 бет Эпиграф
27. https://www.elib.kz/ru/search/read_book/861/
28. Ә.Т. Раисова, С.Б. Байқошқарова «Қалыпты және патология жағдайындағы балалар мен жасөспірімдер гинекологиясы». – Алматы:«Эверо», 2020 ж. - 224 бет Эпиграфhttps://www.elib.kz/ru/search/read_book/815/
29. Каракушикова А.С., Рахимова К.В., Абдуллаева Г.М Перинатальная патология у недоношенных детей: клинико-иммунологическая диагностика, лечение и реабилитация: Эверо, 2020. – 186 Эпиграф
30. https://www.elib.kz/ru/search/read_book/846/
31. Іш қуысының анатомиясы және хирургиялық операция әдістері: 1-том. Оқу құралы/Алибеков А.Е.// Алматы, Эверо, 2020. -316 б. Эпиграф https://www.elib.kz/ru/search/read_book/6466/
32. Бас және мойынның клиникалық анатомиясы Қайырбекова Қ.Қ. , – Алматы: Эверо, 2017 ЦБ Aknurpress <https://www.aknurpress.kz/reader/web/1850>
33. Есту, сөйлеу және көру мүшелерінің анатомиясы, физиологиясы, патологиясы.Туғанбекова К.М., Ахметова Н.Ш., Тамабаева М.К. , – Қарағанды, 2019 <https://www.aknurpress.kz/reader/web/1041>
34. Құраш, А. Ғ. Бастың және мойынның қабыну аурулары Т. 2 : оқулық / А. Ғ. Құраш. - Алматы : New book, 2022 Мулти мед учеб
35. <https://mbook.kz/viewer/course/854>
36. Зубрицкий, М. Г. Атлас по патологической анатомии = Atlas of pathological anatomy : учебное пособие. — Минск : Вышэйшая школа, 2021. — 272 с. <https://www.iprbookshop.ru/119965.html>
1. Vickie Y. Jo, MDJason L. Hornick, MD, PhDNeoplastic Mimics in Soft Tissue and Bone Pathology// eBook Collection EBSCO

Literature

Propaedeutics of Internal Diseases

Main:

- 1) Василенко, В. Х. Пропедевтика внутренних болезней. Т. 1. : Учебник / В. Х. Василенко, В. В. Василенко ; . - Алматы :Newbook, 2021. - 400. с.
- 2) Василенко, В. Х. Пропедевтика внутренних болезней. Т. 2. : Учебник / В. Х. Василенко, В. В. Василенко ; . - Алматы :Newbook, 2021. - 212. с.
- 3) Василенко, В. Х. Пропедевтика внутренних болезней. Т. 3. : Учебник / В. Х. Василенко, В. В. Василенко ; . - Алматы :Newbook, 2021. - 208. с.
- 4) Мухин, Н. А. **Ішкі аурулар** пропедевтикасы: оқулық. - М. : ГЭОТАР - Медиа, 2015
- Ахметов, Қ. Ж. Ішкі аурулар пропедевтикасы пәнінің клиникалық дәрістері [Мјтін] : оқу құралы / Қ. Ж. Ахметов. - Алматы : New book, 2022. - 266 с.
- 5) Василенко, В. Х. Ішкі аурулар пропедевтикасы. Т. 1. :оқулық / мем. тілге ауд. К. Асқамбай. - Алматы :Эверо, 2015. - 336 б. с
- 6) Василенко, В. Х. Ішкі аурулар пропедевтикасы. Т. 2 :оқулық / мем. тілге ауд. К. Асқамбай. - Алматы :Эверо, 2015. - 176 б. с
- 7) Айтбембет, Б. Н.**Ішкі** ағза **ауруларының** пропедевтикасы: оқулық Алматы : Эверо, 2014. - 568 бет.-
- 8) Маколкин, В. И. **Ішкі аурулар**: оқулық. - М. : ГЭОТАР - Медиа, 2014. - 976 бет
- Гребенев, А. Л. Пропедевтика внутренних болезней : учебник / А. Л. Гребенев. - 5-е изд., перераб. и доп. - Алматы :Эверо, 2014. - 520 с
- 9) "Тыныс алу жүйесі" модулі: интеграцияланған оқулық = **Модуль "Дыхательная система"** : интегрированный учебник / С.

ONTÜSTİK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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11-2025
Page 35of 41

К. Жауғашева [ж. б.]. - М. : "Литтерра", 2014. - 272 бет.

10) "Жүрек-қан тамырлар жүйесі" модулі : интеграцияланған оқулық = **Модуль "Сердечно-сосудистая система"** : интегрированный учебник / С. Б. Жауғашева [ж. б.] ; жауапты ред. С. Б. Жәутікова, С. Д. Нұрсұлтанова. - М. : "Литтерра", 2014. - 344 бет. .

11) "Ас қорыту жүйесі" модулі : интеграцияланған оқулық = **Модуль "Пищеварительная система"** : интегрированный учебник / С. К. Жауғашева [ж. б.] ; жауапты ред. С. Б. Жәутікова, С. Д. Нұрсұлтанова. - М. : "Литтерра", 2014. - 376 бет. с. : ил.

12) "Зәр шығару жүйесі" модулі : интеграцияланған оқулық = **Модуль "Мочевыделительная система"** : интегрированный учебник / С. К. Жауғашева [ж. б.] ; жауапты ред. С. Б. Жәутікова, С. Д. Нұрсұлтанова. - М. : Литтерра, 2014. - 256 бет. с. : ил.

13) "Қан түзуші жүйесі" модулі : интеграцияланған оқулық = **Модуль "Кровотворная система"** : интеграционный учебник / С. К. Жауғашева [ж. б.] ; жауапты ред. С. Б. Жәутікова, С. Д. Нұрсұлтанова. - М. : "Литтерра", 2014. - 288 бет. с.

14) "Эндокриндік жүйе" модулі : интеграцияланған оқулық = **Модуль "Эндокринная система"** : интеграционный учебник / С. К. Жауғашева [ж. б.] ; жауапты ред. С. Б. Жәутікова, С. Д. Нұрсұлтанова. - М. : "Литтерра", 2014. - 328 бет. с.

15) "Тірек-қимыл жүйесі" модулі : интеграцияланған оқулық = **Модуль "Опорно-двигательная система"** : интегрированный учебник / С. К. Жауғашева [ж. б.] ; жауапты ред. С. Б. Жәутікова, С. Д. Нұрсұлтанова. - М. : Литтерра, 2014. - 240 бет. с. : ил.

16) "Жүйке жүйесі" модулі : интеграцияланған оқулық = **Модуль "Нервная система"** : интегрированный учебник / С. К. Жауғашева [ж. б.] ; жауапты ред. С. Б. Жәутікова, С. Д. Нұрсұлтанова. - М. : "Литтерра", 2014. - 264 бет. с. : ил.

17) Vasilenko, V. K. Propaedeutics of internal diseases. 1-volume: textbook / - Almaty : "Evero", 2017. - 364 p.

18) Vasilenko, V. K. Propaedeutiks of internal diseases. 2- volum : textbook / . - Almaty : "Evero", 2017. - 364 p.

19) Vasilenko, V. K. Propaedeutics of internal diseases. 3- volume : textbook / . - Almaty : "Evero", 2017. - 188 p

20) Ivashkin, V. T. Internal diseases propedeutics : textbook / V. T. Ivashkin, A. V. Okhlobystin. - ; The book is recommended by the Educational and Metodological association on Medical and Pharmaceutical Education of Russia. - М. : GEOTAR-Media, 2016. - 176 p.

21) Айтбембет Б. Н. Ішкі ағза ауруларының пропедевтикасы : оқулық / Б. Н. Айтбембет. - Алматы : ЭСПИ, 2023

22) Диагноз при заболеваниях внутренних органов. Формулировка, классификации : учебное пособие / под ред. В. А. Ахмедова. - М. : ГЭОТАР - Медиа, 2016. - 256

Additional

1) Омаров, Т. Р. Неотложные состояния в клинике внутренних болезней : учебное пособие / Т. Р. Омаров, В. А. Омарова. - Караганда : АҚНҰР, 2019. - 518 с

2) Диагноз при заболеваниях внутренних органов. Формулировка, классификации : учебное пособие / под ред. В. А. Ахмедова. - М. : ГЭОТАР - Медиа, 2016. - 256

Мухин, Н. А. Избранные лекции по внутренним болезням : лекция / Н. А. Мухин. - 2-е изд. - М. : ГЭОТАР - Медиа, 2017. - 328 с.

3) Ішкі аурулар бойынша объективтендірілген құрамдастырылған клиникалық емтихан : оқу-әдістемелік құрал = Объективный структурированный клинический экзамен по внутренним болезням : учебно методическое пособие / М. Оспанов атындағы БҚММУ ; құрас. Қ. Ж. Ахметов [ж.б.]. - М. : "Литтерра", 2016. - 368 б.

4) Сырқатнама : оқу-әдістемелік құрал / Г. М. Есенжанова [Ж. б.] ; ҚР ДС ЖӘД Министрлігі. - 2-бас. толық және өнд. - Қарағанды : ЖК "Ақнұр", 2015. - 80 с

Ахметов К. Ішкі аурулар пропедевтикасы пәнінің клиникалық дәрістері; оқу құралы. - Эверо, 2014

5) Ахметов Қ. Ж. Ішкі аурулар пропедевтикасы пәнінің клиникалық дәрістері : оқу құралы / Қ. Ж. Ахметов. - Алматы : New book, 2022. - 266 с.

6) Diagnosis of internal diseases by syndromes : training manual / Е. К. Bekmurzaeva. - Almaty : Эпиграф, 2022. - 128 с

7) Сейдахметова А. А. Ішкі аурулардың метеорологиялық факторларға тәуелділігі : монография / А. А. Сейдахметова. - Шымкент, 2025. - 108 б. - Мәтін.

1. Pathological Physiology:

Main:

2. Патофизиология. 2 томдық. 1 т.: оқулық / қазақтіл. ауд. Б. А. Жетпісбаев ; ред. В. В. Новицкий. - М. : ГЭОТАР - Медиа, 2017. - 640 бет.

3. Патофизиология. Екі томдық. 2 т. : оқулық / қазақтіл. ауд. С. Б. Жәутікова ; ред. В. В. Новицкий. - М. : ГЭОТАР - Медиа, 2018. - 464 б. +эл. опт. диск (CD-ROM).

4. Нұрмұхамбетұлы, Ә. Клиникалық патофизиология. I - том: оқулық Патофизиология-II және оның клиникалық медицинадағы мәселелеріне нұсқама. - 2-ші бас. - Алматы : Эверо, 2016. - 180б. с.

5. Нұрмұхамбетұлы, Ә. Клиникалық патофизиология. 2 -т. Патофизиология - 2 және оның клиникалық медицинадағы маңызды мәселелеріне нұсқама : оқулық. - 2-ші бас. - Алматы : Эверо, 2016. - 252 бет.

6. Нұрмұхамбетұлы, Ә. Клиникалық патофизиология. 3 т. Патофизиология - II және оның клиникалық медицинадағы маңызды мәселелеріне нұсқама: оқулық. - 2-ші бас. - Алматы : Эверо, 2016. - 248 бет.

7. Нұрмұхамбетұлы, Ә. Патофизиология. 1 том : оқулық / Ә. Нұрмұхамбетұлы. - өнд., толықт. 3-бас. - Алматы : Эверо, 2015. - 182 бет

8. Нұрмұхамбетұлы, Ә. Патофизиология. 2 том: оқулық / Ә. Нұрмұхамбетұлы. - өнд., толықт. 4-бас. - Алматы : Эверо,

ONTÜSTİK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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Working curriculum of the discipline "Cardiovascular system in pathology" (Syllabus)		

11-2025
Page 36of 41

2015. - 214 бет

9. Нұрмұхамбетұлы, Ә. Патофизиология. 3 том: оқулық / Ә Нұрмұхамбетұлы. - өнд., толықт. 4- бас. - Алматы :Эверо, 2015. - 216 бет

10.Нұрмұхамбетұлы, Ә. Патофизиология. 4 том: оқулық / Ә. Нұрмұхамбетұлы. - өнд., толықт. 4-бас. - Алматы :Эверо, 2015. - 154 бет

11.Патофизиология : оқулық. 2 томдық. 1 том / қазақ тіл. ауд. Б. А. Жетпісбаев ; ред. В. В. Новицкий. - 4-бас.өнд.толық. - М. : ГЭОТАР - Медиа, 2017. - 640

12.Патофизиология : оқулық. 2 томдық. 2 том / қазақ тіл. ауд. С. Б. Жәутікова ; ред. В. В. Новицкий. - 4-бас.өнд.толық. - М. : ГЭОТАР - Медиа, 2018. - 464 б. +эл. опт. диск (CD-ROM).

13.Патологическая физиология. Т.1 : учеб. для мед. вузов / ред. А. Д. Адо [и др.]. - Алматы :Эверо, 2014. - 244 с.

14.Патологическая физиология. Т.2 : учебник для мед. вузов / А. Д. Адо [и др.]. - Алматы :Эверо, 2015. - 216 с.

15.Ефремов, А. В. Патофизиология. Основные понятия : учебное пособие / А. В. Ефремов, Е. Н. Самсонова, Ю. В. Начаров. - М. : ГЭОТАР - Медиа, 2010. -256с

16.Фролов, В. А. Общая патологическая физиология : учебник / Рек. учебно-метод. объедин. по мед. и фарм. образ. вузов России. - М. : Издательский дом "Высшее образование и Науки", 2013. - 568 с. : ил.

17.Патологическая физиология (Общая и Частная) : учебник / В.А. Фролов [и др.]. - 4-е изд.,пер.и доп. - М. : Издательский дом "Высшее образование и наука", 2019. - 730 с.

18.Ахметова, Н. Ш. Анатомия, физиология, патология органов слуха, речи, зрения [Текст] : учебное пособие. - 3-е изд. - Караганда : АҚНҰР, 2019.

19.Патофизиология. В 2 т. Т. 2 [Текст] : учебник / под ред. В. В. Новицкого, Е. Д. Гольдберга, О. И. Уразовой ; М-во образования и науки РФ. - 4-е изд., перераб. и доп ; Рек. ГОУ ВПО "ММА им. И. М. Сеченова". - М. : ГЭОТАР - Медиа, 2012. - 640 с. + эл. опт. диск (CD-ROM)

20.Патофизиология. В 3 т. Т. 3 [Текст] : учебник / А. И. Воложин [и др.] ; под ред. А. И. Воложина, Г. В. Порядина. - Рек. УМО объедин. по мед. и фарм. образованию вузов России в качестве учебника. - М. : Академия, 2006. - 304 с. - (Высшее проф. образование).

21.Jain, A. K. Textbook of physiology : textbook. Vol. 1 / A. K. Jain . - 6 th ed. - NevDelhi :Avichal publishing company, 2015. - 590 p.Перевод заглавия:

22.Jain, A. K. Textbook of physiology : textbook. Vol. 2 / A. K. Jain . - 6nd ed. - NevDelhi :Avichal publishing company, 2015. - 1121 p. Перевод заглавия:

23.Norris, Tommie L. Porth's Pathophysiology: Concepts of Altered Health States [Text] : textbook / Tommie L. Norris. - 10 nd ed. - [S. l.] :Wolters Kluwer, 2019. - 1573 p. - ISBN 978-1-4963-7759-3 : 48115 Tr. Перевод заглавия: Патофизиология Porth's: концепции измененных состояний здоровья

24.Pathophysiology. Volume 1. : the book for medical institutes / A. D. Ado [and others]. - Almaty : "Evero" , 2017. - 216 p.

25.Pathophysiology. Volume 2. : the book for medical institutes / A. D. Ado [and others]. - Almaty : "Evero" , 2017. - 188 p.

26.Pathophysiology. Volume 3. : the book for medical institutes / A. D. Ado [and others]. - Almaty : "Evero" , 2017. - 323 p.

27.Pathophysiology of Disease: An Introduction to Clinical Medicine.7rd. ed McGraw-Hill Education, 2014

28.Kharissova, N. M. Physiology of the digestivesystem : teaching textbook / N. M. Kharissova. - Алматы :Эверо, 2016. - 428 p.

Additional

1. Патологиялық физиология. Тәжірибелік сабақтарға нұсқау:оқу құралы = Патофизиология. Руководство к практическим занятиям :учеб.пособие / В. В. Новицкий [ж. б.]; ред. басқ. В. В. Новицкий, О. И. Уразова ;каз. тіліне ауд. С. Б. Жәутікова. - М. : ГЭОТАР - Медиа, 2014. - 768 бет.с.

2. Уразалина, Н. М. Тест тапсырмалары. II-бөлім. Біртектес дерттік үрдістер: - Алматы :Эверо, 2014. - 184 бет.

3. Жәутікова, С. Б.Мамандандырылған патологиялық физиология курсы: оқу-әдістемелік құралы / С. Б. Жәутікова, Е. Қ. Өмірбаева ; ҚР денсаулық сақтау министрлігі; ҚММУ. - Қарағанды : ЖК "Ақнұр", 2013. - 268 бет.

4. Жәутікова, С. Б. Патологиялық физиология пәні бойынша ситуациялық есептер жинағы: оқу-әдістемелік құрал. - Қарағанды : ЖК "АқНұр 2013

5. Патофизиология. Задачи и тестовые задания: учеб.-методическое пособие / под ред. П. Ф. Литвицкого ; М-во образования и науки РФ. - ; Рек. ГОУ ВПО "ММА им. И. М. Сеченова". - М. : ГЭОТАР - Медиа, 2013. - 384 с. : ил

6. Роуз, Алан Г.Атлас патологии. Макро- и микроскопические изменения органов: атлас; пер. с англ. под ред Е. А. Коган / Алан Г. Роуз ; ред. Е. А. Коган. - М. : ГЭОТАР - Медиа, 2010. - 576 с.

7. Klatt, Edward C Robbins and Cotran Atlas of Pathology : textbook / Edward C. Klatt. - 3th ed. - Philadelphia : Elsevier Saunders, 2014. - 587 p. - ISBN 978-1-4557-4876-1 : 33050.00 Tr. Перевод заглавия: Роббинси Котран Атлас патологии

Pathological Anatomy:

Main:

Ахметов, Ж. Б. Патологиялық анатомия. Т.1: оқулық / Ж. Б. Ахметов. - Алматы :Newbook, 2022. - 360 бет.

Ахметов, Ж. Б. Патологиялық анатомия. Т.2: оқулық / Ж. Б. Ахметов. - Алматы :Newbook, 2022. - 344 бет.

5.Роббинсдерттану негіздері (жалпыбөлім). 1 :оқулық / ред. В. Кумар [ж/б]. - / Қазақтіліне аударған Қ. Қарымбаев ; ҚР білім және ғылым министрлігі. - Алматы :Эверо, 2014. - 480 бет

ONTÜSTİK QAZAQSTAN MEDISINA AKADEMIYASY AŴ		SOUTH KAZAKHSTAN MEDICAL ACADEMY AO «Южно-Казахстанская медицинская академия»
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Working curriculum of the discipline "Cardiovascular system in pathology" (Syllabus)		

11-2025
Page 37of 41

6. Манекенова К.Б Патологиялық процестер мен аурулардың морфологиялық көріністерінің салыстырмалы сипаттамасы. Оқу құралы. "SkySystems" 2019
7. Ахметов, Ж. Б. Патологиялық анатомия: оқулық. - М.: "Литтерра", 2016. - 792 бет с.
8. Струков, А. И. Патологиялық анатомия :оқулық / . - М.: ГЭОТАР - Медиа, 2015. - 984 бет.
9. Патология. Екітомдық. 1 том.:оқулық / Ред. бас. М. А. Пальцев, Қаз. тіл. ауд. С. А. Апбасова. - М.: ГЭОТАР - Медиа, 2015. - 536 бет с.: ил.
10. Ахметов, Ж. Б. Патологиялық анатомия :оқулық / Ж. Б. Ахметов. - ; ҚР денсаулық сақтау министрлігі. - Алматы :Эверо, 2014. - 700 бет.
11. Патологическая анатомия. Т.1. Общая патология : учебник: в 2-х томах / под ред. В. С. Паукова. - 2-е изд. доп. - М.: ГЭОТАР - Медиа, 2020. - 720 с.
12. Патологическая анатомия. Т.2. Частная патология : учебник: в 2-х томах / под ред. В. С. Паукова. - 2-е изд. доп. - М.: ГЭОТАР - Медиа, 2020. - 528 с.
13. Струков, А. И. Патологическая анатомия : учебник. - 6-е изд., перераб. и доп. - М.: ГЭОТАР - Медиа, 2021. - 880 с.
14. Манекенова К.Б. Сравнительная характеристика морфологических проявлений патологических процессов и заболеваний. Учебное пособие. "Sky Systems"2019
15. Есиркепов, М. М.Патологическая анатомия генома : учеб.-наглядное пособие - Караганда : ИП "Изд-во АҚНҰР", 2013
16. Kumar , V. Robbins Basic Pathology : textbook / V. Kumar , A. K. Abbas, J. C. Aster. - 10 nd ed. - [S. l.] : Elsevier, 2017. - 930 p.
17. Kumar , Vinay Robbins and Cotran. Pathologic Basis of Disease : south Asia edition. Vol. 2 / V. Kumar ,Abyl K. Abbas, Jon C. Aster. - 9nd ed. - [S. l.] : Reed Elsevier india private limmed, 2015. - 1391 p. .
18. Kumar , Vinay Robbins and Cotran. Pathologic Basis of Disease : south Asia edition. Vol. 1 / V. Kumar ,Abyl K. Abbas, Jon C. Aster. - 9 nd ed. - [S. l.] : Reed Elsevier india private limmed, 2015. - 1391 p.

Additional

1. Патологиялық анатомия атлас: = Патологическая анатомия : атлас: учеб. пособие - М.: ГЭОТАР - Медиа, 2014.
2. Кисманова, Г. Н.Жалпы патологиялық процестер нұсқауы : оқу құралы / Г. Н. Кисманова. - Алматы : Эверо, 2010. - 122 бет.
3. Повзун, С. А. Патологическая анатомия в вопросах и ответах: учеб. пособие / С. А. Повзун. - 3-е изд., перераб. и доп. ; Рек. ГБОУ ВПО "Первый Мос. гос. мед. ун-т им. И. М. Сеченова". - М.: ГЭОТАР - Медиа, 2016. - 176 с. -
4. Патологическая анатомия. Руководство к практическим занятиям: учебное пособие / М-во образ. и науки РФ. Рек. ГБОУ ВПО "Первый МГМУ им. И. М. Сеченова" ; Под. ред. О. В. Зайратьянца, Л. Б. Тарасовой. - 2-е изд., испр. и доп. - М.: ГЭОТАР - Медиа, 2015. - 696
5. Патологическая анатомия. Руководство к практическим занятиям : учебное пособие / ред. О. В. Зайратьянца. - 2-е изд., испр. и доп. - М.: ГЭОТАР - Медиа, 2021. - 696 с.
6. Тусупбекова, М. М. Клиническая патоморфология: монография / М. М. Тусупбекова. - Алматы :Эверо, 2016. - 184 с.
7. Тусупбекова, М. М. Морфологический атлас общепатологических процессов: учебное пособие. - Алматы :Эверо, 2016. - 164 с.
8. Моисеев, В. С.Острая сердечная недостаточность : руководство / В. С. Моисеев, Ж. Д. Кобалава. - М.: ООО "Медицинское информационное агентство", 2012. - 328 с
9. Роуз, Алан Г.Атлас патологии. Макро- и микроскопические изменения органов : атлас: пер. с англ. под ред Е. А. Коган / Алан Г. Роуз ; ред. Е. А. Коган. - М.: ГЭОТАР - Медиа, 2010. - 576 с
10. Синельников, А. Я.Атлас микроскопической патологии человека: учеб. пособие. -Рек. Учеб.-методическим об-нием по мед. и фарм. образованию вузов России. - М.: Новая волна : Издатель Умеренков, 2007. - 320 с.
11. Klatt, Edward C Robbins and Cotran Atlas of Pathology : textbook / Edward C. Klatt. - 3th ed. - Philadelphia : Elsevier Saunders, 2014. - 587 p.
12. Klatt, Edward C Robbins and Cotran Atlas of Pathology : textbook / Edward C. Klatt. - 3th ed. - Philadelphia : Elsevier Saunders, 2014. - 587 p.

Pharmacology

Main:

- Фармакология :оқу құралы = Фармакология : учебное пособие / Г. М. Пичхадзе [т.б.]. - М.: "Литтерра", 2016. - 504 бет
- Стикеева, Р. Қ. Фармакология-1: оқуқұралы / Р. Қ. Стикеева. - Алматы :Эверо, 2016. - 148 бет.с.
- Харкевич, Д. А. Основы фармакологии: учебник. - М.: ГЭОТАР - Медиа, 2015. - 720 с.
- Аляутдин, Р. Н. Фармакология : учебник.- М.: ГЭОТАР - Медиа, 2014. - 704 с. :
- Харкевич, Д. А. Фармакология :оқулық. - М.: ГЭОТАР - Медиа, 2014. - 784 бет.
- Рахимов, Қ. Д. Фармакология :оқуқұралы. - Алматы : ЖШС "Жания-Полиграф", 2014. - 554 бет.с.
- Орманов, Н. Ж. Фармакология. 1-кітап :оқулық / Н. Ж. Орманов, Л. Н. Орманова. - Алматы :Эверо, 2013. - 656 бет.с.
- Орманов, Н. Ж. Фармакология. 2-кітап :оқулық / Н. Ж. Орманов, Л. Н. Орманова. - Алматы :Эверо, 2013. - 512 бет.с.
- Фармакология : учебник / под ред. Р. Н. Аляутдина. - М.: ГЭОТАР - Медиа, 2013. - 832 +эл.
- Katzung , Bertram G.Basic and Clinical Pharmacology : textbook / Katzung Bertram G. - 14 nd ed. - [S. l.] : McGraw-Hill education,

ONTÜSTİK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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Working curriculum of the discipline "Cardiovascular system in pathology" (Syllabus)		

11-2025
Page 38of 41

2018. - 1250 p.

Goodman and Gilman's, A. The Pharmacological Basis of Therapeutics : textbook / Goodman & Gilman's A. ; editor L. L. Brunton . - 13 nd ed. - New York : McGraw-Hill Education, 2018. - 1419 p.

Whalen Karen Pharmacology : lippincott Illustrated reviews / Karen Whalen ; ed.: Garinda Feild, Rajan Radhakrishnan. - 7th ed. - [s. l.] : Wolters Kluwer, 2019. - 593 p.

Additional

Usmle Step 1. Pharmacology : Lecturer notes / D. Graig [et. al.]. - New York, 2019. - 321 p. - (Kaplan Medical)

Фармакология : нұсқаулық = Фармакология : руководство / Г. М. Пичхадзе [т.б.]. - М. : "Литтерра", 2017. - 640 бет с.

Машковский М.Д. Лекарственные средства. 16.-е издание. перераб., доп. и испр. М. Новая волна. 2017. – 1216 с.

Дәнекер ұлпалар ауруларының фармакотерапиясы: оқулық / З. А. Керимбаева [ж.б.]. - Алматы : Эверо, 2016. - 184 б. с.

Микробқа қарсы дәрілердің фармакологиясы: оқу құралы / Т. А. Муминов [ж.б.]; қаз. тіл. ауд. Н. М. Малдыбаева. - Алматы : Литер Принт. Казахстан, 2016.-552 бет. с.

Фармакология антимикробных средств : учеб.пособие / Т. А. Муминов. - Алматы : Литер Принт. Казахстан, 2016.

Фармакология:руководство к лабораторным занятиям : учеб. пособие / под ред. Д. А. Харкевича. - 6-е изд., испр. и доп. ;

Рек. учебно-методическим объединением по мед. и фарм. образованию вузов России. - М.: ГЭОТАР - Медиа, 2014.- 512 с

Рахимов, К. Д. Фитофармакология. Фармакология - Тезаурус. : оқу құралы = Фитофармакология. Фармакология -Тезаурус :

учеб. пособие. - Алматы: ЖШС "Жания-Полиграф", 2015. – 528

Фармакология негіздері және рецептурасы : оқулық / М. З. Шайдаров [ж.б.]. - Астана :Ақнұр, 2014. - 398 бет. с.

Основы фармакологии с рецептурой : учебник / М. З. Шайдаров [и др.]. - Астана :Ақнұр, 2014. - 406 с.

Жаугашева, С. К. Фармакологический глоссарий = Фармакологиялық глоссарий / сөздік = PHARMACOLOGIC GLOSSARY

: словарь. - 2-е изд. - Алматы : Эверо, 2013. - 132 с.

Аскорыту ағзалары ауруларының фармакотерапиясы.: оқу құралы/ Н.Ж. Орманов, Г.Ж. Садырханова. 2013.

Тыныс алу жолдары ағзалары ауруларының фармакотерапиясы.: оқу құралы/ Н.Ж. Орманов. 2013.

Орманов, Н. Ж. Жалпы рецептура. Жалпы фармакология : оқуқұралы. - Шымкент : "RISO", 2013. - 76 бет.с.

Орманов, Н. Ж. Фармакологический справочник лекарственных препаратов (классификация, номенклатура, механизм

действия и показания к применению) : учеб.-методическое пособие. - Алматы :Эверо, 2013. - 138 с

Орманов, Н. Ж. Жалпы рецептура. Жалпы фармакология :оқуқұралы / ҚР денсаулық сақтау министрлігі; ОҚММА. -

Алматы: Эверо, 2012. - 102 бет.с.

Орманов, Н. Ж. Фармакотерапия. I-кітап :оқулық / Н. Ж. Орманов, Л. Н. Орманова. – Шымкент : ЮКГФА, 2012.

Орманов, Н. Ж. Фармакотерапия. II-кітап: оқулық / Н. Ж. Орманов, Л. Н. Орманова. - Шымкент : ОҚМФА, 2012.

Орманов, Н. Ж. Фармакотерапия. II-кітап: оқулық / Н. Ж. Орманов, Л. Н. Орманова. - Шымкент : ОҚМФА, 2012.

12. Discipline Policy

Requirements for students (attendance, behavior, grading policy, penalties, incentives, etc.)

- observe medical ethics and deontology;
- no smoking in the academy;
- maintain cleanliness in the department;
- do not damage furniture in classrooms;
- treat textbooks with care;
- maintain the appearance of a medical university student;
- observe safety regulations;
- during quarantine, wear medical masks and comply with sanitary and epidemiological regulations;
- do not miss classes without a good reason;
- classes missed for a valid reason must be made up in a timely manner, but only with permission from the dean's office and at a time determined by the teacher;
- don't be late for classes;
- have the necessary documentation in class: syllabus, methodological instructions for classes, lectures, notebook and textbook;
- prepare for classes conscientiously;
- be active during classes;
- do not engage in other activities during classes: do not talk, do not smoke, do not chew gum, do not eat food, do not use the phone, do not listen to music, do not read newspapers and magazines, do not prepare for classes in another subject;
- maintain silence and order during breaks;
- implement SIW in a timely manner.

Penalties for failure to complete sections of the work:

ONTÜSTİK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
Department of Pathology and Forensic Medicine Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology Department of Propaedeutics of Internal Diseases		
Working curriculum of the discipline "Cardiovascular system in pathology" (Syllabus)		11-2025 Page 39 of 41

- If you miss lectures without a valid reason, your midterm assessment grade will be reduced – 1 point for each missed lecture;
- If you miss a SIW without a valid reason, your midterm assessment score will be reduced by 2 points for each missed lesson;
- In case of a single violation of the discipline policy, the student is given a warning;
- In case of systematic violation of the discipline policy, information about the student's behavior is transferred to the faculty dean's office.

Criteria for non-admission to final control:

A student who has received an unsatisfactory grade for one of the types of tests (RC 1, RC 2, average grade of the current test) is not admitted to the final test for the discipline.

13. Academic policy based on the moral and ethical values of the academy

Regulations and Rules of SKMA. Academic policy.

P.4. Code of honor of the student

P.10. Organization of the educational process

P.12. Grading Policy

The final grade is calculated automatically based on the average grade of the current control, the average grade of the midterm control and the grade of the final control.

$$\text{Final score (100\%)} = \text{RD (60\%)} + \text{IC (40\%)}$$

$$\text{RD (60\%)} = \text{RKsr (20\%)} + \text{TKsr (40\%)}$$

$$\text{PKcp} = (\text{PK1} + \text{PK2}) : 2$$

$$\text{Final score (100\%)} = \text{RKsr} \times 0.2 + \text{TKsr} \times 0.4 + \text{IR} \times 0.4$$

RD – Admission Rating

IC – final control assessment

PKcp – average grade of the midterm control taking into account penalty points

TKsr – average assessment of current control taking into account SIW

PK1 – boundary control 1 **PK2** – boundary control 2

14. Approval and revision

Date of agreement with the Library and Information Center	Protocol No. 25.06.25	Full name of the head of the LIT Darbicheva R.T.	Signature
Date of approval at the Department of Pathology and Forensic Medicine	Protocol No. 13 26.06.2025	Head of Department Nadykova A.Sh.	Signature
Date of approval at the Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology	Protocol No. 17 17.06.2025	Head of Department Toqsanbaeva Zh.S.	Signature
Date of approval at the Department of Propaedeutics of Internal Diseases	Protocol No. 11 26.06.2025	Head of Department Bekmurzaeva E.K.	Signature
Date of approval at AC EP "Medicine"	Protocol No. 5 27.06.25	Chairman of the AC EP Auezkhankyz Dانا	Signature
Date of revision at the department	Protocol No.	Head of the Department	Signature
Date of revision at AC EP	Protocol No.	Chairman of the AC EP	Signature