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**	

	LO 1 **LO 2**	**LO1.** Applies fundamental knowledge of biomedical, clinical, epidemiological, and social-behavioral sciences to practice.
	LO 3 **LO 4**	**LO2.** Provides patient-centered care in biomedical, clinical, epidemiological sciences aimed at diagnosis, treatment and prevention of the most common diseases.
	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

6.2	Number of hours (150)	Lectures	Practical lessons	Lab.	SIWT	SIW
		10	40		15	85

6.3 Study plan for the discipline

Days / Form of the lesson		1	2	3	4	5	6	7	8	9	10	11	12	Hours
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 ME No. 1						1 ME No. 2	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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Department of Propaedeutics of Internal Diseases			
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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

			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

			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-paratov 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

							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- paratov 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

		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

		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. Antiatherosclero tic 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

			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 questioning, checklist for solving a situational problem .
	Propedeutics of	Laboratory and	Laboratory and instrumental	LO2	1/5	Preparation and	Presentation

	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 questioning, 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 micropreparations, 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.

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,

	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

	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		

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

	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 (genera examination, palpation, percussion, auscultation, blood pressur measurement, determination of pulse characteristics, respiratory rate etc.) in children and adolescents. - Conducts correct linking of objective physical examination dat (palpation, auscultation, percussion), correctly interprets laboratory an instrumental examination data. -Ability to evaluate pathophysiological patterns of research results Finds and compares the connection between the main symptoms an syndromes. - Substantiates and establishes a presumptive syndrome-base 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

		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, differentiates between primary and secondary complaints with errors, and is poorly oriented 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. - Links data from objective physical examination (palpation, auscultation, percussion), correctly interprets data from laboratory and instrumental studies. Has errors in assessing examination results. - Is unable to evaluate pathophysiological patterns of research results. Is unable to determine the relationships between the main symptoms and syndromes. Establishes a presumptive syndrome-based diagnosis without substantiating the data. - Has a low level of communication skills in medical practice; subjectively conveys appropriate information;
	Unsatisfactory corresponds to points 25-49	- The student has no idea about the main and secondary complaints, and is not oriented in the collected anamnesis of life and illness. - Is unable to carry out practical skills to interpret their results. Cannot determine the relationship of objective physical examination data (palpation, auscultation, percussion), incorrectly interprets laboratory and instrumental examination data. - Does not know how to evaluate pathophysiological patterns of research results. Does not find and is not able to compare 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.
	Unsatisfactory corresponds to points 0-24	
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.

	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	

	corresponds to points 0-24	
	Unsatisfactory corresponds to points 0-24	

Checklist for assessing the analysis of scientific articles

Score in points by % / Evaluation criteria	Unsatisfactory (0-49%)	Satisfactory (50-69%)	Good (70-89%)	Excellent (90-100%)
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.

		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

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

	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

	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:

		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

	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
Description of the microslide	"Excellent" corresponds to points 95-100	-correctly named the organ or tissue, correctly characterized pathological changes: localization, made

		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

	"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

	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;

		- 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

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
	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;

		- 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

No.	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

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

No.	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	
C +	2.33	70-74	
C	2.0	65-69	Satisfactory
C -	1.67	60-64	
D+	1.33	55-59	
D-	1.0	50-54	
FX	0.5	25-49	Unsatisfactory
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 «Aknurpress» - https://www.aknurpress.kz/
Электронная библиотека «Эпиграф» - http://www.elib.kz/

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
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Electronic Textbooks

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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://elib.kz/ru/search/read_book/684/
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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 clasrooms;
- 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:

● 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.

Final score (100%) = **RD** (60%) + **IC** (40%)

RD (60%) = **RKsr** (20%) + **TKsr** (40%)

PKcp = (PK1 + PK2): 2

Final score (100%) = **RKsr** x 0.2 + **TKsr** x 0.4 + **IR** x 0.4

RD – Admission Rating

IC – final control assessment

PKcp – average grade of the midterm control taking into accou nt 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. 7 25.06.25	Full name of the head of the LIC Darbicheva R.I.	Signature
Date of approval at the Department of Pathology and Forensic Medicine	Protocol No. 13 26.06.2025	Head of Department Sadykova A.Sh.	Signature
Date of approval at the Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology	Protocol No. 11 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. 6 27.06.25	Chairman of the AC EP Auezkhankyzy Dana	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