

ONTÜSTIK-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		47 / 11 1p. from 52
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)		

SYLLABUS

Working curriculum of the discipline "Blood and lymph in pathology" Educational program 6B10115 "Medicine"

1.	General information about the discipline		
1.1	Course code: KLP 3307	1.6	Academic year: 2025-2026
1.2	Course name: Blood and lymph in pathology	1.7	Course:3
1.3	Prerequisites: blood and lymph in normal	1.8	Semester: 6
1.4	Postrequisites: Fundamentals of Internal Medicine	1.9	Number of credits (ECTS): 4/120
1.5	Cycle: SD	1.10	Component: IC
2.	Description of the discipline		
Integrated discipline: formation of fundamental knowledge on the basics of semiotics, syndromology, physical examination methods, issues of etiology, pathogenesis, morphogenesis of the blood and lymph 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 a 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	• Assessment of practical skills	3.8	Other (specify)
4.	Objectives of the discipline		
Formation of a holistic understanding of the main symptoms and syndromes of blood and lymph diseases in adults, as well as methods of their study. Ensuring the achievement of final learning outcomes based on the joint study of propaedeutics of internal diseases with fundamental disciplines. Formation of clinical thinking skills based on knowledge of etiology, pathophysiological mechanisms of the course, pathological changes, complications and outcomes of diseases, physical and clinical laboratory examination methods and the choice of drugs in adults with the main clinical syndromes of blood and lymph diseases.			
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 pathology of the digestive and endocrine systems		
LO2.	Has knowledge of methods for interviewing 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 digestive and endocrine systems		
LO3.	Has knowledge of methods for interviewing 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 digestive and endocrine systems, formulates a syndromic diagnosis, fills out a medical history		

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LO4.	Reports information, ideas, problems and solutions to patients and their family members, knows the norms of ethics and deontology in communication with patients, their relatives and colleagues					
LO5.	Identifies 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 digestive and endocrine systems, evaluates the results of experimental studies					
LO6.	Selects medicinal means in accordance with the diagnosis, writes prescriptions, determines the dosage regimen, recognizes adverse effects of drugs, predicts the development of side effects and interactions of drugs used in pathology of the digestive and endocrine systems					
5.1	LO discipline		Learning outcomes of the EP, which are associated with the discipline LO			
	LO 1		LO 1 Apply fundamental knowledge in biomedical, clinical, epidemiological and social-behavioral sciences in practice.			
	LO 2					
	LO 3		LO 2 Provides patient-centered care in the fields of biomedical, clinical, and epidemiological sciences aimed at diagnosing, treating, and preventing the most common diseases.			
	LO 4					
	LO 5		LO 6 Provides outpatient consultation, diagnostics, treatment, dynamic monitoring and rehabilitation of pediatric and adult patients, including pregnant women, based on the principles of evidence-based medicine.			
	LO 6		LO 11 Analyzes the effectiveness of diagnostics and treatment results using the principles of personalized medicine			
6.	Detailed information about the discipline					
6.1	Venue (building, auditorium): - 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 Clinic of Pharmacology: Shymkent, Al-Farabi Ave., 1, main educational building of SKMA, 4th floor, room No. 419, No. 421, No. 425, No. 429, No. 431, No. 434, No. 417, lecture hall No. 4; tel. 40-82-06 (ATS), 227 (ext.). Location of the Department of Internal Medicine Propaedeutics: Shymkent, ParkHealth Clinic, Kabanbai Batyr St., 26; tel.: 8 701 738 6114, e-mail: propedevtica_vb@mail.ru					
6.2	Number of hours 120	Lectures	Practical les.	Lab .	SIWT	SIW

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8.	Thematic plan					
Wee k/ day	Topic Title	Summary	RO discipl ine	Quan tity hours	Methods/ learning technologie s	Forms/ evaluatio n methods
1	Propaedeutics of internal diseases. Lecture 1 Research methodspatients with pathology of the hematopoietic system. Diagnostic value.	Methods of examination of patients with pathology of the hematopoietic system. Diagnostic value. Questioning, general examination, main and additional complaints of patients with pathology of the hematopoietic system. Data of physical methods of examination of the hematopoietic system. Method and technique of palpation and percussion of the spleen. Method and technique of palpation of the lymph nodes.	LO 2	1	Overview lecture	Blitz survey, feedback
	Propaedeutics of internal diseases. Practicallesson 1	Methods of examination of	LO 1 LO 2 LO 6	3	Discussion of the topic of the lesson,	Oral Questioning

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Methods of examination of patients with pathology of the hematopoietic system. Diagnostic value.	patients with pathology of the hematopoietic system. Diagnostic value. Questioning, main and additional complaints, general examination of patients with pathology of the hematopoietic system. Data of physical methods of examination of the hematopoietic system. Method and technique of palpation and percussion of the spleen. Method and technique of palpation of the lymph nodes.			practical work what skills	Checklist, Practical Assimilation Checklist their skills
Propaedeutics of internal diseases. SIWT /SIW 1 SIW tasks: theoretical training on the topic of the lesson.	Methods of examination of patients with pathology of the hematopoietic system. Examination, general examination of patients with pathology of the hematopoietic system. Methods	LO 1 LO 2 LO 6	1/5	Case solution, performance of practical skills.	Case solution checklist. Practical Skills Checklist

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		and techniques of palpation and percussion of the spleen. Palpation of the lymph nodes.				
2	Pharmacology. Lecture 1 Medicines, affecting hematopoiesis	Drugs used in anemic syndrome. Drugs affecting erythropoiesis and leukopoiesis. Classification. Mechanism of action. Pharmacokinetics of drugs. Indications and contraindications.	LO 1 LO 6	1	Overview lecture	Blitz poll, reversion connection
	Pharmacology. Practical lesson 1 Medicines, affecting hematopoiesis Agents affecting erythropoiesis and leukopoiesis.	Erythropoiesis stimulants. Leukopoiesis stimulants. Drugs used in anemic syndrome. Drugs used in hemorrhagic and myelo- and lymphoproliferative syndrome. Classification. Mechanism of action. Pharmacokinetics of drugs. Indications and contraindications.	LO 6	3	oral survey, description of images, solution of test tasks	Checklist for oral questioning
	Pharmacology. SIWT /SIW 1 SIW tasks: write prescriptions for drugs	Drugs used for sickle cell anemia. Classification. Comparative	LO 6 LO 7	1/6	Case solution article	Case Solution Checklist

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		characteristics of drugs. Application. Possible complications and their prevention. General characteristics. The mechanism of antitumor action of drugs of different groups.				
3	Pathological anatomy. Lecture 1 Anemia	Anemias associated with deficiency of macronutrients and vitamins, bone marrow pathology, dyserythropoietic anemia (suppression of erythropoiesis, decreased iron utilization), acute and chronic posthemorrhagic anemia. Hemolytic anemias (intra- and extracellular hemolysis): spherocytosis, elliptocytosis, pathology of erythrocyte enzymes, hemoglobin defects; immune, non-immune, toxic anemia. Etiology,	LO 1	1	Overview lecture	Blitz Poll Feedback

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		pathogenesis, morphogenesis, pathological anatomy, complications and causes of death. Clinical significance				
	Pathological anatomy. Practical lesson 1 Anemia	Anemias associated with deficiency of macronutrients and vitamins, bone marrow pathology, dyserythropoietic anemia (suppression of erythropoiesis, decreased iron utilization), acute and chronic posthemorrhagic anemia.	LO 3 LO 5	3	Discussion topics, description of macro- and micropreparations with a conclusion, case study	Checklist
	Pathological anatomy. SIWT /SIW 1 SIW tasks: theoretical training on the topic of the lesson. Solution of cases specified in the content on the topic of the lesson.	Hemolytic anemias (intra- and extracellular hemolysis): spherocytosis, elliptocytosis, pathology of erythrocyte enzymes, hemoglobin defects; immune (isoimmune, non-immune - microangiopathic, autoimmune), toxic anemia. Etiology, pathogenesis, pathological anatomy, complications,	LO 3 LO 5	1	Case solution	Case Solution Checklist

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		causes of death. Clinical significance.				
4	Pathological anatomy and physiology. Lecture 1 Pathology of red blood cells	Anemias, classification, etiopathogenesis, manifestations. Posthemorrhagic, hemolytic and dyserythropoietic anemias, characteristics, changes in the hemogram. Erythrocytosis, concept, types, causes, mechanisms of development, manifestations, changes in the hemogram. Pathological forms of erythrocytes. Clinical significance	LO 1	1	Overview lecture	Blitz Poll Feedback
	Pathological anatomy and physiology. Practical lesson 1 Pathology of red blood cells	Anemias, classification, etiopathogenesis, manifestations. Posthemorrhagic, hemolytic and dyserythropoietic anemias, characteristics, changes in the hemogram. Erythrocytosis, concept, types, causes, mechanisms of development, manifestations, changes in the hemogram. Pathological	LO 3 LO 5	3	Work in small groups, discuss the topic, case study	Checklist

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		forms of erythrocytes. Clinical significance.				
	Pathological anatomy and physiology. SIWT /SIW 1 SIW tasks: theoretical training on the topic of the lesson. Solution of cases specified in the content on the topic of the lesson.	Blood volume disorders, hyper- and hypovolemia. Changes in blood viscosity and osmotic pressure, erythrocyte sedimentation rate and resistance, hemoglobin composition. Clinical significance.	LO 3 LO 5	1/6	Case solution	Case Solution Checklist
5	Propaedeutics of internal diseases. Lecture 2 Leading clinical syndromes (anemic, hemorrhagic and thrombocytopenic) in hematology.	Predisposing factors and causes leading to the development of anemic, hemorrhagic and thrombocytopenic syndromes. Questioning, main and additional complaints, anamnestic features, general examination and objective data of the patient. Laboratory and instrumental research methods for leading clinical syndromes of diseases of the organs of the hematopoietic	LO 2	1	Overview lecture	Blitz Poll Feedback

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Propaedeutics of internal diseases. Practical lesson 2 Leading clinical syndromes (anemic) in hematology. Diagnostic value.	system. Predisposing factors and causes leading to the development of anemic syndrome. Questioning, main and additional complaints, anamnestic features, general examination and objective data of the patient with anemic syndrome. Laboratory and instrumental research methods for anemic syndrome.	LO 1 LO 2 LO 6	1	Discussion se topics of practical classes, solving situational problems	Oral Checklis tsurvey and situation al tasks
Propaedeutics of internal diseases. SIWT /SIW 2 SIW task: preparation for the final control.	Border control #1 Topics of lectures, practical classes, independent work, covered during 1-5 days of training	LO 1 LO 2 LO 6	1/3	Integrated monitoring of educational achievements using control educational cases, solving test tasks	Case solution checklist. Practical Skills Checklist. Midterm Control Checklist
Pharmacology. Practical lesson 2 Funds, affecting platelet aggregation, blood clotting and fibrinolysis.	Drugs used for the prevention and treatment of thrombosis. Drugs that reduce platelet aggregation (antiplatelet agents). Drugs that reduce blood clotting (anticoagulants).	LO 6	2	Discussion se questions on the topic, completing test tasks, solving situational problems.	Checklis t for oral question ing

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		Fibrinolytic agents (thrombolytic agents). Agents that help stop bleeding (hemostatics).				
	Pharmacology. SIWT /SIW 2 SIW tasks: write prescriptions for drugs	Drugs used in hemorrhagic and myelo- and lymphoproliferative syndrome. Drugs used in chronic myelogenous leukemia. Drugs used in multiple myeloma.	LO 6 LO 7	1/2	Case solution	Case Solution Checklist
6	Pathological anatomy. Lecture 2 Leukemia	Acute and chronic leukemia. Etiology, pathogenesis, pathological anatomy, complications, causes of death. Clinical significance.	LO 1	1	Overview lecture	Blitz Poll Feedback
	Pathological anatomy. Practical lesson 2 Leukemia	Acute and chronic leukemia. Etiology, pathogenesis, pathological anatomy, complications, causes of death. Clinical significance	LO 3 LO 5	3	Discussion topics, description of macro- and micropreparations with a conclusion, case study	Checklist
	Pathological anatomy. SIWT /SIW 2 SIW tasks: theoretical training on the topic of the lesson. Solution of cases specified in	Anemia. Congenital and acquired hypo- and aplastic anemia.	LO 3 LO 5	1/6	Case solution	Case Solution Checklist

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	the content on the topic of the lesson.	Etiology, pathogenesis, pathological anatomy, complications, causes of death. Clinical significance				
7	Pathological anatomy physiology. Lecture 2 Leukocyte pathology	Leukocytosis, concept, types, causes, development mechanisms, manifestations. Changes in the leukocyte formula. Leukopenia, concept, types, pathogenesis. Pathological forms of leukocytes. Clinical significance	LO 1	1	Overview lecture	Blitz Poll Feedback
	Pathological anatomy physiology. Practical lesson 2 Leukocyte pathology	Leukocytosis, concept, types, causes, development mechanisms, manifestations. Changes in the leukocyte formula. Leukopenia, concept, types, pathogenesis. Pathological forms of leukocytes. Clinical significance	LO 3 LO 5	3	Work in small groups, discussion of the topic, case study	Checklist
	Pathological anatomy physiology. SIWT /SIW 2 SIW tasks: theoretical training on the topic of the lesson.	Disorders of lymph formation, lymph	LO 3 LO 5	1/6	Case solution	Case Solution Checklist

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	Solution of cases specified in the content on the topic of the lesson.	circulation, lymph coagulation, lymphostasis. Mechanical, dynamic and resorption lymphatic insufficiency, etiopathogenesis, manifestations. Clinical significance.				
8	Pharmacology. Lecture 2 Funds, affecting platelet aggregation, blood clotting and fibrinolysis.	Drugs used for the prevention and treatment of thrombosis. Drugs that reduce platelet aggregation (antiplatelet agents). Drugs that reduce blood clotting (anticoagulants). Fibrinolytic agents (thrombolytic agents). Agents that help stop bleeding (hemostatics)	LO 1 LO 6	1	Overview lecture	Feedback (test questions)
	Pharmacology. Practical lesson 3 Anti-region many means	Classification. Comparative characteristics of drugs. Application. Possible complications and their prevention. General characteristics. The mechanism of antitumor action of drugs	LO 6	3	Discussion questions on the topic, completing test assignments, solving situational problems.	Checklist for oral questioning

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		of different groups.				
	Pharmacology SIWT /SIW 3 SIW tasks: write prescriptions for drugs	Antitumor agents. Monoclonal antibodies - tarstuzumab, rituximab, bevacizumab, cetuximab. Protein kinase inhibitors - imatinib, gifetinib, erlotinib, temsirolimus and other antitumor drugs: asparaginase-6 hydroxyurea. Application in medicine characteristics of myelo- and lymphoproliferative syndromes in children.	LO 6 LO 7	1/6	Case solution	Case Solution Checklist
9	Pathological anatomy physiology. Practical lesson 3 Pathology of hemostasis	Typical forms of hemostasis pathology. Hemorrhagic syndromes, concept, types. Vasopathies, thrombocyte pathology, coagulopathy, etiopathogenesis, manifestations. Thrombophilia, concept, types, causes of development. Clinical significance.	LO 3 LO 5	2	Work in small groups, discussion of the topic, case study	Checklist
	Pathological anatomy	Disseminated	LO 3	1/2	Case	Case

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	physiology. SIWT /SIW 3 SIW tasks: theoretical training on the topic of the lesson. Solution of cases specified in the content on the topic of the lesson.	intravascular coagulation syndrome, concept, causes, development mechanisms, stages, manifestations, outcomes. Clinical significance.	LO 5		solution	Solution Checklist
9	Pathological anatomy. Practical lesson 3 Lymphomas	Lymphomas. Classification. Etiology, pathogenesis, pathological anatomy, complications, causes of death. Clinical significance.	LO 3 LO 5	2	Discussion topics, description of macro- and micropreparations with a conclusion, case study	Checklist
	Pathological anatomy. SIWT /SIW 3 SIW tasks: theoretical training on the topic of the lesson. Solution of cases specified in the content on the topic of the lesson.	Pathology of hemostasis. Pathological anatomy of DIC syndrome. Etiology, pathogenesis, pathological anatomy, complications, causes of death. Clinical significance	LO 3 LO 5	1/2	Case solution	Case Solution Checklist
10	Propaedeutics of internal diseases. Practical lesson 3 Leading clinical syndromes (hemorrhagic(thrombocytopenic) in hematology. Diagnostic value.	Predisposing factors and causes leading to the development of hemorrhagic and thrombocytopenic syndromes. Questioning, main and	LO 1 LO 2 LO 6	4	Discussion of the topic of the lesson, practical work what skills	Oral Questioning Checklist, Practical Assimilation Checklist their skills

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		additional complaints, anamnestic features, general examination and objective data of the patient with hemorrhagic and thrombocytopenic syndromes. Laboratory and instrumental research methods for hemorrhagic and thrombocytopenic syndromes.				
	Propaedeutics of internal diseases. SIWT /SIW 3 SIW task: preparation for midterm control.	Border control #2 Topics of lectures, practical classes, independent work, covered during 6-10 days of training	LO 1 LO 2 LO 6	1/6	Integrated monitoring of educational achievements using control educational cases, solving test tasks	Case solution checklist. Practical Skills Checklist · Midterm Control Checklist
8.1	Preparation and implementation of interim assessment	12 hours				
9.	Teaching and assessment methods					
9.1	Lectures	Overview lectures				
9.2	Practical classes	Work in small groups, discussion of the topic, oral questioning, writing prescriptions, solving a case, describing macro- and micropreparations with a conclusion, performing practical skills, interpreting the results of clinical laboratory studies.				
9.3	SIWT /SIW	Case study solution, scientific article analysis, Presentation defense and practical skills implementation, discussion of the topic. Project defense.				
9.4	Border control	Integrated monitoring of educational achievements using control educational cases, testing				
10.	Evaluation criteria					

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10.1 Criteria for assessing the learning outcomes of the discipline					
№ LO	Name of learning outcomes	Unsatisfactory	Satisfactorily	Fine	Great
LO 1	Demonstrates knowledge and understanding of the basics of semiotics and syndromology, etiology, pathogenesis and morphogenesis pathological changes in blood and lymph	1. Doesn't have a basic understanding of the basics semiotics and syndromology, does not determine symptoms and syndromes. 2. It can't explain etiology, pathogenesis and morphogenesis pathological changes in blood and lymph	1. Does not have a basic understanding of semiotics and syndromology, makes gross mistakes when definition symptoms and syndromes in blood pathologies and lymph. 2. Makes mistakes when explaining etiology, pathogenesis and morphogenesis pathological changes in blood and lymph	1. Has a basic knowledge of semiotics and syndromology, reveals symptoms and syndromes. 2. Explains etiology, pathogenesis and morphogenesis pathological changes in blood and lymph, but allows unprincipled inaccuracies	1. Fluent in the basics semiotics and syndromology, on one's own defines symptoms and syndromes. 2. Free explains etiology, pathogenesis and morphogenesis pathological changes blood and lymph
LO 2	Has mastered the methods conducting an inquiry, physical examinations adults, uses clinical thinking in collecting information when making a plan examinations; plans	Doesn't know the basics physiological system processes blood and lymph	Makes mistakes when describing main physiological system processes	Describes main physiological system processes blood and lymph	1. Demonstrates main physiological processes blood systems and

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	volume of main and additional research for clarification of the syndrome defeats at blood pathologies and lymph		blood and lymph		lymph
LO 3	Uses clinical thinking in collecting information when interpreting results morphological, laboratory and instrumental research methods patients at blood pathologies and lymph, formulates syndromic diagnosis, fills out medical history	1. Doesn't know the basics metabolic pathways that influence system function blood systems and lymph. 2. Doesn't understand biochemical processes, related to blood system and lymph	1. Doesn't know completely main metabolic pathways, affecting system function blood systems and lymph. 2. Poor understanding biochemical processes, related to blood system and lymph	1. Explains main metabolic pathways that influence system function blood systems and lymph. 2. Understands well biochemical processes, related to blood system and lymph	1. Owns skills clinical thinking, applies knowledge in collection information at interpretations results morphologically, laboratory And instrumental methods research patients with blood and lymph pathology. 2. Formulates a syndrome diagnosis, fills out the medical history. 3. Solves problems effectively situationa

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					1 tasks
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	1. Doesn't know how to apply knowledge about blood and lymph system in a clinical context, has not acquired the skills to collect a clinical anamnesis and physical examination of patients with blood and lymph diseases to provide first aid. 2. Not able to interpret the results laboratory and instrumental research	1. Not fully able to apply knowledge about blood and lymph system in a clinical context, collection of clinical The anamnesis and physical examination of patients with blood and lymphatic diseases for the provision of first aid is carried out with errors. 2. Weak navigates through interpretation of results laboratory and instrumental research	1. Lists information about the blood system and lymph in a clinical context, collects clinical history and physical examination of patients with blood and lymph diseases and provides first aid. 2. Well versed in interpreting the results of laboratory and instrumental studies	1. Demonstrates freely knowledge of the blood and lymph system in a clinical context, collects clinical history and physical examination of patients with blood and lymph diseases and provides first aid. 2. Excellent orientation in the interpretation of the results of laboratory and instrumental studies
LO 5	Identifies 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	1. Unable to determine pathological processes at the organ and cellular levels, makes gross errors. 2. Cannot interpret data on the etiology,	1. Determines pathological processes at the organ and cellular levels, but	1. Determines pathological processes at the organ and cellular	1. Independently determines pathological processes at the organ

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development of complications and outcomes of blood and lymph pathology in children, evaluates the results of experimental studies	pathophysiology and morphology of diseases, taking into account the clinical data of patients. 3. Makes mistakes conclusions, poorly oriented and do not explain the patterns of development of complications and outcomes of blood and lymph pathology. 4. Unable to evaluate results experimental research, makes fundamental mistakes. 5. Incapable of deciding situational tasks	makes gross errors. 2. Cannot interpret independently 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 blood and lymph pathology. 4. Difficulty evaluating the results of experimental studies research, allows for fundamental inaccuracies. 5. Solves	levels. Interprets data on etiology, pathophysiology and morphology of diseases taking into account the clinical data of patients. 3. Draws conclusions, will explain the patterns of development complications and outcomes of blood and lymph pathology. 4. Evaluates the results experimental studies, but allows non-fundamental inaccuracies. 5. Solves situational issues tasks	and cellular levels. 2. Interprets independently data on the etiology, pathophysiology and morphology of diseases, taking into account the clinical data of patients. 3. Draws conclusions, will explain the patterns of development complications and outcomes of blood and lymph pathology. 4. Evaluates the results experimental research. 5. Solves problems effectively
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			situational problems, but makes fundamental mistakes		y situational tasks
LO 6	Chooses medicines according to the diagnosis, writes prescriptions, determines the dosage regimen, recognizes adverse effects of medicines, predicts the development of side effects and drug interactions in blood and lymph pathology	1. Defines the overall pharmacological group of drugs. 2. Writes out recipe with making mistakes	1. Selects pharmacological group of drugs for organs and systems. 2. Writes out recipe with help of reference literature/sources	1. Selects medicinal means for the treatment and prevention of the most common diseases. 2. Writes out recipe for the given drug without errors 3. Calculates dose of medication means	1. Selects medicinal drugs from various pharmacological groups in accordance with indications for use, contraindications and side effects. 2. Writes out recipe for medicinal means in the most appropriate dosage form depending on age, gender, and functional characteristics. 3. Conducts calculation of doses by various methods and determines the frequency

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					y and duration of use of the drug means
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10.2 Methods and criteria for evaluation

Checklist for practical lesson

No.	Evaluation criteria	Level			
		Great	Fine	Satisfactorily	Unsatisfactory
Practical classes:					
1	Written response to the questions of this assignment	30	21	15	0
2	Oral answer on questions of this task	30	21	15	0
3	Completing test tasks	12	8	6	0
4	Solving situational problems	28	20	14	0
	General:	100	70	50	0

Checklist of situational tasks

N o.	Evaluation criteria	Points
1	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.	"Excellent" 90-100%
2	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.	"Good" 70-89%
3	Allows minor inaccuracies when discussing a given task, has difficulty interpreting analyses proposed in a situational task. Draws conclusions with difficulty.	"Satisfactory" 50-69%
4	Allows fundamental errors in discussing a situational task. Passive, unable to draw appropriate conclusions.	"Unsatisfactory" 0-49%

Checklist for assessing a lesson

Form of control	Grade	Evaluation criteria
Carrying out practical work	Great corresponds to scores of 95-100 90-94	- completed the practical work on time without any errors and submitted a report it; - took an active part in the discussion o

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		research results; - made a well-reasoned conclusion, wh demonstrating original thinking
	Finecorresponds to scores of 85-89 80-84 75-79 70-74	- completed the practical work on time submitted a report on it, making minor mistakes; - took an active part in the discussion o research results
	Satisfactorilycorresponds to scores of 65-69 60-64 50-54	- completed the practical work on time submitted a report on it, having made fundamental mistakes; - was not active during the discussion a needed the teacher's help
	Does not meet the scores satisfactorily 25-49	- failed to submit a report on practical v on time, made serious mistakes, and did r complete all the practical work required b
	Unsatisfactory corresponds to scores 0-24	- did not take part in the discussion of r results of the work
Case study	Greatcorresponds to scores of 95-100 90-94	- solved cases within a certain time; - gave full answers to all questions
	Finecorresponds to scores of 85-89 80-84 75-79 70-74	- solved cases within a certain time; - gave complete answers to all question - made minor mistakes when solving ca
	Satisfactorilycorresponds to scores of 65-69 60-64 50-54	- solved cases within a certain time; - gave incomplete answers to questions - made fundamental mistakes when sol
	Unsatisfactory corresponds to scores 25-49	- solved cases incorrectly or did not sol them at all;
	Does not meet the scores satisfactorily 0-24	- made gross mistakes when solving ca
Interpretation of clinical laboratory test results	Greatcorresponds to scores of 95-100 90-94	- correctly, without any errors, interpret the results of clinical laboratory tests; - made a reasonable conclusion
	Finecorresponds to scores of 85-89 80-84 75-79 70-74	- correctly interpreted the results of clir laboratory tests, making minor errors; - made a reasonable conclusion
	Satisfactorilycorresponds to scores of 65-69	- correctly interpreted the results of clir laboratory studies, having made fundame

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	60-64	errors;
	50-54	- made an unfounded conclusion
	Does not meet the scores satisfactorily 25-49	- incorrectly interpreted the results of clinical and laboratory tests, making gross errors;
Discussion of the topic	Does not meet the scores satisfactorily 0-24	- did not draw a conclusion
	Greatcorresponds to scores of 95-100 90-94	- did not make any mistakes during the discussion; - was oriented in the theories, concepts directions of the discipline and gave them critical assessment; - used scientific achievements of other disciplines
	Finecorresponds to scores of 85-89 80-84 75-79 70-74	- during the discussion he did not make gross mistakes, but he did make inaccurate and minor errors, which he corrected himself - managed to systematize the program material with the help of the teacher
	Satisfactorilycorresponds to scores of 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
	Does not meet the scores satisfactorily 25-49	- made gross mistakes during the discussion; - did not study the basic literature on the topic of the lesson;
	Unsatisfactory corresponds to scores 0-24	- failed to use the scientific terminology of the discipline
The test is assessed using a multi-point knowledge assessment system.	Greatcorresponds to scores of 95-100 90-94	- correctly completed 90-100% of test tasks
	Fine corresponds to scores of 85-89 80-84 75-79 70-74	- correctly completed 70-89% of test tasks
	Satisfactorily corresponds to scores of 65-69 60-64 50-54	- correctly completed 50-69% of test tasks
	Unsatisfactory corresponds to scores 25-49	- completed less than 50% of test tasks correctly
	Unsatisfactory	

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corresponds to scores 0-24		
Checklist for assessing practical skills "Propaedeutics of internal diseases"		
Form of control	Grade	Evaluation criteria
Implementation of practical skills	Great corresponds to grade A (4.0; 95-100%); A- (3.67; 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. - Conduct physical examination accurately: - general examination (examination of the skin and subcutaneous fat, visible mucous membrane, measurement of respiratory rate, heart rate, blood pressure); - palpation (determination of resistance, pain, vocal fremitus, localization, amplitude, area, strength, pulsation, consistency, mobility, diameters, peristalsis, zones of pain, rigidity), - Percussion (determination of comparative, topographic boundaries of the lungs, area, excursion; determination of absolute and relative boundaries of the heart, configuration, diameter and vascular bundle; determination of the boundaries of the liver, spleen and stomach, percussion symptom); - auscultation (listening to vesicular and bronchial breathing, wheezing, crepitations, pleural friction noise in the lungs; listening to normal and pathological heart tones and murmurs, diastolic and systolic murmur). - Substantiates and makes a tentative syndromic diagnosis. - Used additional literature when preparing for the lesson. Systematizes the material on the topic. Communicates effectively in medical practice, objectively conveys relevant information, knows and uses the norms of ethics and deontology when performing skill;
	Fine corresponds to B+ scores (3.33; 85-89%) B (3.0; 80-84%) B- (2.67; 75-79%) C+ (2.33; 70-74%)	- The student is well oriented when questioning and examining patients. Correctly selects questions when collecting anamnesis, accurately analyzes the main and secondary complaints, is well oriented in the collected anamnesis of life and disease. - It is good to conduct a physical examination: - general examination (examination of the skin and subcutaneous fat, visible mucous membrane,

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		measurement of respiratory rate, heart rate, blood pressure); - palpation (determination of resistance, pain, vocal fremitus, localization, amplitude, area, strength, pulsation, consistency, mobility, diameters, peristalsis, zones of pain, rigidity), - Percussion (determination of comparative, topographi boundaries of the lungs, area, excursion; determination of absolute and relative boundaries of the heart, configuration, diameter and vascular bundle; determination of the boundaries of the liver, spleen and stomach, percussion symptom); - auscultation (listening to vesicular and bronchial breathing, wheezing, crepitations, pleural friction noise in the lungs; listening to normal and pathological heart tones and murmurs, diastolic and systolic murmur). Makes a presumptive syndrome-based diagnosis without substantiating the data.
	Satisfactorily corresponds to points C (2.0; 65-69%) C- (1.67; 60-64%) D+ (1.33; 55-59%) D- (1.0; 50-54%)	- The student is able to navigate through questioning and examining patients, analyzes primary and secondary complaints with errors, and has poor understanding of the collected anamnesis of life and illness. - There are errors in the physical examination: - general examination (examination of the skin and subcutaneous fat, visible mucous membrane, measurement of respiratory rate, heart rate, blood pressure); - palpation (determination of resistance, pain, vocal fremitus, localization, amplitude, area, strength, pulsation, consistency, mobility, diameters, peristalsis, zones of pain, rigidity), - Percussion (determination of comparative, topographi boundaries of the lungs, area, excursion; determination of absolute and relative boundaries of the heart, configuration, diameter and vascular bundle; determination of the boundaries of the liver, spleen and stomach, tingling symptom); - auscultation (listening to vesicular and bronchial breathing, wheezing, crepitations, pleural friction noise in the lungs; listening to normal and pathological heart tones and murmurs, diastolic and systolic murmur). - <u>Unable to compare</u> relationship between the main symptoms and syndromes. Makes a presumptive syndrome-based diagnosis without substantiating the data

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		Low level of communication in medical practice; subjectively conveys appropriate information;
	Unsatisfactory corresponds to FX points (0.5; 25-49%)	The student has no idea about the main and secondary complaints and is not familiar with the collected anamnesis of life and illness. - Is unable to carry out practical skills to interpret their results. Does not see the connection between objective physical examination data: - general examination (examination of the skin and subcutaneous fat, visible mucous membrane, measurement of respiratory rate, heart rate, blood pressure); - palpation (determination of resistance, pain, vocal fremitus, localization, amplitude, area, strength, pulsation, consistency, mobility, diameters, peristalsis, zones of pain, rigidity), - Percussion (determination of comparative, topographic boundaries of the lungs, area, excursion; determination of absolute and relative boundaries of the heart, configuration, diameter and vascular bundle; determination of the boundaries of the liver, spleen and stomach, percussion symptom); - auscultation (listening to vesicular and bronchial breathing, wheezing, crepitations, pleural friction noise in the lungs; listening to normal and pathological heart tones and murmurs, diastolic and systolic murmur).
	Unsatisfactory corresponds to F scores (0; 0-24%)	<u>Does not find and is not able to compare</u> relationship between the main symptoms and syndromes. Makes a presumptive syndrome-based diagnosis without substantiating the data - Did not participate in the group work. Incapable of communicating in medical practice; does not convey proper information, does not possess and is not able to use the norms of ethics and deontology when performing the skill. Gross errors when answering the teacher's questions, without using specific terminology in your answers.

Checklist for assessing answers to descriptions of macropreparations

N o.	Evaluation Criteria/Evaluation	Great	Fine	Satisfactorily	Unsatisfactory
1	Name of the organ	4	3	2	0
2	Organ size	10	7	5	0
3	Surface: condition of the capsule or serous membrane, dullness, shine,	1	1	1	0

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4	superposition				
4	Characteristics of the pathological focus: Localization, size, shape (if an ulcer – condition of the bottom), color, consistency	5	4	2	0
5	Pathological diagnosis/conclusion				
6	Total	20	15	10	0

Checklist for assessing answers to descriptions of microscopic specimens

N o.	Evaluation Criteria/Evaluation	Great	Fine	Satisfactorily	Unsatisfactory
1	Name of an organ or tissue	4	3	2	0
2	Characteristics of pathological changes: localization, description	10	7	5	0
3	Coloring	1	1	1	0
4	Pathological diagnosis/conclusion	5	4	2	0
5	Total	20	15	10	0

Checklist for SIWT /SIW

No.	Evaluation criteria	Level			
		Great	Fine	Satisfactorily	Unsatisfactory
SIW and SIWT :					
1	Presentation Defense	50	35	25	0
2	Executionpractic al skills	50	35	25	0
	General:	100	70	50	0

Checklist for assessing written tasks during midterm assessment (PID)

Form control	Grade	Evaluation criteria
Solving situational problems using tickets	"Great" 90-100%	The student accurately analyzes the main and secondary complaints, and is well oriented in the collected anamnesis of life and illness. <u>Connects</u> data from objective physical examination (palpation, auscultation, percussion), correctly interprets data from laboratory and instrumental studies. Able to evaluate pathophysiological patterns of research results. <u>Finds and compares</u> the relationship between the

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		main symptoms and syndromes. <u>Justifies and sets</u> presumptive syndrome diagnosis. The student answered the question on the task without error based on understanding, knowledge and clinical thinking regarding the given clinical situation. Conducts basic physical research on a given problem using an algorithm without errors (practical skill #1) Conducts basic physical research on a given problem using an algorithm without errors (practical skill #2) The student is excellent at understanding primary and secondary complaints and is well oriented in the collected anamnesis of life and illness.
	"Fine" 70-89%	ectsdata from objective physical examination (palpation, auscultation, percussion), incorrectly interprets data from laboratory and instrumental studies. There are errors in assessing the pathophysiological patterns of the research results. <u>and compares</u> the relationship between the main symptoms and syndromes. presumptive syndrome diagnosis without data substantiation The student did not answer the question on the task in full for this clinical situation. Conduct basic physical research on a given problem with gaps in the algorithm (practical skill #1) Conduct basic physical research on a given problem with gaps in the algorithm (practical skill #2)

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		The student analyzes the main and secondary complaints with errors and has poor understanding of the collected anamnesis of life and illness.
	"Satisfactory" 50-69%	ects data from objective physical examination (palpation, auscultation, percussion), correctly interprets data from laboratory and instrumental studies. le to assess pathophysiological patterns of research results. le to <u>compare</u> the relationship between the main symptoms and syndromes. presumptive syndrome diagnosis without data substantiation The student answered the question on the problem without understanding, knowledge and clinical thinking on the given clinical situation. Conducts basic physical research on a given problem with fundamental errors (practical skill #1) Conducts basic physical research on a given problem with fundamental errors (practical skill #2)
	"Unsatisfactory" 0-49%	student has no idea about the main and secondary complaints and is not familiar with the collected anamnesis of life and illness. n't see the <u>connection</u> data from objective physical

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	examination (palpation, auscultation, percussion), incorrectly interprets data from laboratory and instrumental studies. le to evaluate pathophysiological patterns of research results. not find and is not able to compare the relationship between the main symptoms and syndromes. <u>Puts</u> presumptive syndrome diagnosis without substantiation of data. The student gave an incorrect answer to the question on the task The demonstrated skill for this task does not correspond to the algorithm (practical skill #1) The demonstrated skill for this task does not correspond to the algorithm (practical skill #2)
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Checklist for assessing the analysis of scientific articles

Score in points By %	Dissatisfied quite (0-49%)	Satisfy quite (65-54%)	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 a scientific article when enumeration, skips components	1. Lists the structural components of a scientific article, but violates the order of the structure	1. Maintains the order of the structure of a scientific article listing: - Name - Authors - Publishing house - Summary - General part (introduction, materials and methods, Results and discussion - Conclusions - Bibliography
Analysis content scientific article	1. Does not understand the relevance of the	1. Understands the relevance problems	1. Suggests relevance problems	1. On one's own substantiates and argues

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	problem, is not capable of discussion content of the article	2. Lists purpose of work, materials and methods used in the work 3. Understands the content of scientific article Lists conclusions, list of references in this article	2. Explains the purpose of the work, materials and methods used in the work presents the content of a scientific article 3. Justifies the conclusions 4. Justifies selected list of literature in this article	relevance of the problem 2. Explains the purpose of the work, used in the work Materials and methods 3. Freely expresses semantic content of scientific article 4. Argues and justifies conclusions 5. Has the skill of using literature and justifies the selected list of references 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 know the task at hand problem when answering additional questions	1. Applies the knowledge gained in practical training occupation knowledge on the topic when answering additional questions	1. Apply the knowledge gained during the practical lesson on the topic when answering additional questions, gives a deep and comprehensive argumentation

Multi-point system of knowledge assessment

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

11. Educational resources

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Department of Pathology and Forensic Medicine Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology	47 / 11 35p. from 52
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)	

Electronic resources	Propaedeutics of internal diseases 1) Ivashkin, VTI Internal diseases propedeutics [Electronic resource]: textbook. - Electronic text data (142 Mb). - M: GEOTAR - Media, 2017. - electronic opt. Disk 2) Ishki aurular./Bimurzaev G.N., Zaripova G.K., 2020.https://aknurpress.kz/reader/web/2594 3) Ishki aurular pәninen klinikalyk tapsyrmalar zhinaga. Erzhanova G.A., Mukhanova A.K., 2016/https://aknurpress.kz/reader/web/2370 4) Ishki aurular propedeuticsynan zhardayattyk tapsyrmalar Orazova B.O., Marchenko T.V., 2016/https://aknurpress.kz/reader/web/2348 5) Akhmetov Kayyrgali Zhaleluly. Ishki aurular propaedeutics for clinics. Almaty: "Evero", 2020. – 262 bethhttps://elib.kz/ru/search/read_book/22/ 6) Internal non-infectious diseases with clinical radiological assessment KSU named after A. Baitursynov, 2011. – 94 p. http://rmebrk.kz/book/1024356 7) Ajay K. Singh. Joseph Loscalzo. The Brigham Intensive Review of Internal Medicine Question and Answer Companion: Oxford: Oxford University Press. 2014 // eBook Collection EBSCO 8) Thomas Ciesielski .Washington Manual General Internal Medicine Consult: Third edition. Philadelphia: Wolters Kluwer Health. 2017 // eBook Collection EBSCO
Electronic textbooks	Propaedeutics of internal diseases 1) Internal diseases. V. 1 [Electronic resource]: textbook / edited by V. S. Moiseev. - 3rd ed., corrected and supplemented. - Electronic text data. (66.5 MB). - M.: GEOTAR - Media, 2015. - 960 2) Internal diseases. V. 2 [Electronic resource]: textbook / edited by V. S. Moiseev. - 3rd ed., corrected and supplemented. - Electronic text data. (45.1 MB). - M.: GEOTAR - Media, 2015. - 895 3) Propaedeutics of internal diseases: Textbook. / T.S. Ryabova, E.S. Ryss, V.Ya. Plotkin et al. - St. Petersburg: SpetsLit, 2015. - 414 p. http://rmebrk.kz/book/1174389 4) Internal diseases in the work of a general practitioner: Study guide. / K.Zh. Sadykova, Sh.U. Skenderova, S.K. Sattiev. - Turkestan: Turan, 2017. - 96 p. http://rmebrk.kz/book/1167635

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2) Vasilenko, V. Kh. PROpedeutics of internal diseases. T. 2.: Textbook / V. Kh. Vasilenko, V. V. Vasilenko; . - Almaty: Newbook, 2021. - 212. p. 3) Vasilenko, V. Kh. PROpedeutics of internal diseases. T. 3.: Textbook / V. Kh. Vasilenko, V. V. Vasilenko; . - Almaty: Newbook, 2021. - 208. p. 4) Mukhin, N.A.Ishki auralarpropaedeutics: okulyk. - M.: GEOTAR - Media, 2015 Akhmetov, K. Zh. Zh. Akhmetov. - Almaty: New book, 2022. - 266 p. 5) Vasilenko, V. Kh.Ishki aurular propaedeutics. T. 1. :okulyk / mem. tilge aud. K. Askambay. - Almaty: Evero, 2015. - 336 b. With 6) Vasilenko, V. Kh.Ishki aurular propaedeutics. T. 2: okulyk / mem. tilge aud. K. Askambay. - Almaty: Evero, 2015. - 176 b. With 7) Aitbembet, B. N.Ishkiarza aurularynyn propedeutics: okulyk Almaty: Evero, 2014. - 568 bet.- 8) Makolkin, V.I.Ishki aurular: okulyk. - M.: GEOTAR - Media, 2014. - 976 bet Grebeney, A. L.Propaedeutics of Internal Diseases: textbook / A. L. Grebeney. - 5th ed., revised and enlarged. - Almaty: Evero, 2014. - 520 p. 9) "Tynys alu zhuyesi"modules: integration = Module "Respiratory system": integrated textbook / S. K. Zhaugasheva [film]. - M.: "Litterra", 2014. - 272 editions. 10) "Zhurek-kan tamyrlyr zhuyesi"modules: integrationlangan okulyk = Module "Cardiovascular system": integrated textbook / S. B. Zhaugasheva [zh. b.] ; zhauapt ed. S. B. Zhutikova, S. D. Nursultanova. - M.: "Litterra", 2014. - 344 bet. . 11) "As korytuzhuyesi"modules: integrationlanganokulyk = Module "Digestive system": integrated textbook / S.K. Zhaugasheva [zh. b.] ; zhauapt ed. S. B. Zhutikova, S. D. Nursultanova. - M.: "Litterra", 2014. - 376 bet. With. : ill. 12) "Zərshyfaruzyyesi"modules: integrationlanganokulyk = Module "Urinary system": integrated textbook / S.K. Zhaugasheva [f. b.] ; zhauapt ed. S. B. Zhutikova, S. D. Nursultanova. - M.: Litterra, 2014. - 256 bet. With. : ill. 13) "Kan tuzushi zhuyesi"modules: integrationlangan okulyk = Module "Hematopoietic system": integration textbook / S. K. Zhaugasheva [f. b.] ; zhauapt ed. S. B. Zhutikova, S. D. Nursultanova. - M.: "Litterra", 2014. - 288 bet. With. 14) "Endocrindic zhuye"modules: integrationlangan okulyk = Module "Endocrine system": integration textbook / S. K. Zhaugasheva [f. b.] ; zhauapt ed. S. B. Zhutikova, S. D. Nursultanova. - M.: "Litterra", 2014. - 328 bet. With.	
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15) "Tirek-kimylzhuyesi" modules: integration langanokulyk = Module "Musculoskeletal system": integrated textbook / S.K. Zhaugasheva [f. b.] ; zhauapt ed. S. B. Zhutikova, S. D. Nursultanova. - M.: Litterra, 2014. - 240 bet. With. : ill. 16) "Zhuykezhuyesi" modules: integration langanokulyk = Module "Nervous system" : integrated textbook / S.K. Zhaugasheva [f. b.] ; zhauapt ed. S. B. Zhutikova, S. D. Nursultanova. - M.: "Litterra", 2014. - 264 bet. With. : ill. 17) Vasilenko, VK Propaedeutics of internal diseases. 1-volume: textbook / - Almaty: "Evero", 2017. - 364 p. 18) Vasilenko, VK Propaedeutics of internal diseases. 2-volum: textbook/. - Almaty: "Evero", 2017. - 364 p. 19) Vasilenko, VK Propaedeutics of internal diseases. 3-volume: textbook/. - Almaty: "Evero", 2017. - 188 p 20) Ivashkin, VT Internal diseases propedeutics: textbook / VT Ivashkin, AV Okhlobystin. - ; The book is recommended by the Educational and Methodological association on Medical and Pharmaceutical Education of Russia. - M. : GEOTAR-Media, 2016. - 176 p. 21) Aitbembet B. N. Ishki arza aurularyn propedeutics: okulyk / B. N. Aitbembet. - Almaty: ESPI, 2023 22) Diagnosis of diseases internal organs. Formulation, classification: a tutorial / edited by V. A. Akhmedov. - M.: GEOTAR - Media, 2016. - 256 Propaedeutics of internal diseases Additional: 1) Omarov, T.R. Emergency conditions in the clinic of internal diseases: a tutorial / T. R. Omarov, V. A. Omarova. - Karaganda: AKNUR, 2019. - 518 p. 2) Diagnosis of diseases internal organs. Formulation, classification: a tutorial / edited by V. A. Akhmedov. - M.: GEOTAR - Media, 2016. - 256 Mukhin, N. A. Selected lectures on internal diseases: lecture / N. A. Mukhin. - 2nd ed. - M.: GEOTAR - Media, 2017. - 328 p. 3) Ishki aurular boyinsha objectivetendirilgen qyramdastyrylgan klinikalyk emtikhan: oku-adistemelik kural = Objective structured clinical examination in internal medicine: educational methodological manual / M. Ospanov atyndagy BKMMU; Kuras. K. Zh. Akhmetov [reinforced concrete]. - M.: "Litterra", 2016. - 368 b. 4) Syrkatnama: oku-adistemelik kural / G. M. Yesenzhanova [Zh. b.] ; KR DS ZhOD Minister of League. - 2-bass tolyk. zhene oñd. - Karaganda: Residential complex "Aknur", 2015. - 80 s Akhmetov K. Ishki aurular propaedeutics pәniniñ klinikalyk dәristeri; oku kuraly. - Evero, 2014	
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Department of Pathology and Forensic Medicine Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology	47 / 11 43p. from 52
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)	

5) Akhmetov K. Zh. Ishki aurular propaedeutics pәniniң klinikalyk dәristeri: oku kuraly / k. Zh. Akhmetov. - Almaty: New book, 2022. - 266 p. 6) Diagnosis of internal diseases by syndromes: training manual / EK Bekmurzaeva. - Almaty: Epigraph, 2022. - 128 s. 7) Seydakhmetova A. A. Ishki aurular meteorology and factors of taueldiligi: monograph / A. A. Seidakhmetova. - Shymkent, 2025. - 108 b. - Matin. Pathological physiology: Main: 1. Pathophysiology. 2 tomdyk. 1 t.: okulyk / kazakhtil. room B. A. Zhetpisbaev; ed. V. V. Novitsky. - M.: GEOTAR - Media, 2017. - 640 bet. 2. Pathophysiology. Eki tomdyk. 2 volumes: okulyk / kazakhtil. room S. B. Zhutikova; ed. V. V. Novitsky. - M.: GEOTAR - Media, 2018. - 464 b. + el. optical disk (CD-ROM). 3. Nurmuhambetuly, A. Clinical pathophysiology. I - volume: Okulyk Pathophysiology-II on the clinic of medicine and medicine. - 2nd bass. - Almaty: Evero, 2016. - 180b. With. 4. Nurmuhambetuly, A. Clinical pathophysiology. 2 -t. Pathophysiology - 2 zhane onyn klinikalyk medicinadagy manyzdy мәselelerine nuskama: okulyk. - 2nd bass. - Almaty: Evero, 2016. - 252 bet. 5. Nurmuhambetuly, A. Clinical pathophysiology. 3 volumes. Pathophysiology - II on the clinic of medicine, manyzdy maselelerine nuskam: okulyk. - 2nd bass. - Almaty: Evero, 2016. - 248 bet. 6. Nurmuhambetuly, A. Pathophysiology. Volume 1: okulyk / Ә. Nurmuhambetuly. - Ond., tolykt. 3-bass - Almaty: Evero, 2015. - 182 bet 7. Nurmuhambetuly, A. Pathophysiology. Volume 2: okulyk / Ә. Nurmuhambetuly. - Ond., tolykt. 4-bass - Almaty: Evero, 2015. - 214 bet 8. Nurmuhambetuly, A. Pathophysiology. Volume 3: okulyk / Ә. Nurmukhambetuly. - Ond., tolykt. 4- bass - Almaty: Evero, 2015. - 216 bet 9. Nurmuhambetuly, A. Pathophysiology. Volume 4: okulyk / Ә. Nurmuhambetuly. - Ond., tolykt. 4-bass - Almaty: Evero, 2015. - 154 bet 10. Pathophysiology: okulyk. 2 tomdyk. 1 volume / Kazakh tel. room B. A. Zhetpisbaev; ed. V. V. Novitsky. - 4-bass.ond.tolyk. - M.: GEOTAR - Media, 2017. - 640 11. Pathophysiology: okulyk. 2 tomdyk. Volume 2 / Kazakh tel. room S. B. Zhutikova; ed. V. V. Novitsky. - 4-bass.ond.tolyk. - M.: GEOTAR - Media, 2018. - 464 b. + el. wholesale disk (CD-ROM).	
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ONTÜSTİK-QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ			 SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
Department of Pathology and Forensic Medicine		47 / 11	
Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology		44p. from 52	
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)			

12. Pathological physiology. V. 1: textbook for medical universities / ed. A. D. Ado [et al.]. - Almaty: Evero, 2014. - 244 p. 13. Pathological physiology. Vol. 2: textbook for medical universities / A. D. Ado [et al.]. - Almaty: Evero, 2015. - 216 p. 14. Efremov, A. V. Pathophysiology. Basic concepts: textbook / A. V. Efremov, E. N. Samsonova, Yu. V. Nacharov. - M.: GEOTAR - Media, 2010. - 256 p. 15. Frolov, V. A. General pathological physiology: textbook / Rec. educational-method. unit. for medical and pharmaceutical education of universities of Russia. - M.: Publishing house "Higher education and Sciences", 2013. - 568 p.: ill. 16. Pathological Physiology (General and Specific): textbook / V.A. Frolov [et al.]. - 4th ed., trans. and add. - M.: Publishing house "Higher education and science", 2019. - 730 p. 17. Akhmetova, N. Sh. Anatomy, physiology, pathology of the organs of hearing, speech, vision [Text]: a tutorial. - 3rd ed. - Karaganda: AKNUR, 2019. - 192 p. 18. Pathophysiology. In 2 vols. T. 2 [Text]: textbook / ed. V. V. Novitsky, E. D. Goldberg, O. I. Urazova; Ministry of Education and Science of the Russian Federation. - 4th ed., revised. and additional; Rec. State Educational Institution of Higher Professional Education "MMA named after I.M. Sechenov". - M.: GEOTAR - Media, 2012. - 640 p. + email wholesale disk (CD-ROM) 19. Pathophysiology. In 3 volumes. Volume 3 [Text]: textbook / A. I. Volozhin [et al.]; edited by A. I. Volozhin, G. V. Poryadin. - Rec. UMO united. for medical and pharmaceutical education of higher education institutions of Russia as a textbook. - Moscow: Academy, 2006. - 304 p. - (Higher prof. education). 20. Jain, AK Textbook of physiology: textbook. Vol. 1/AK Jain. - 6 th ed. - Nev Delhi : Avichal publishing company, 2015. - 590 p. Title translation: Textbook of Physiology 21. Jain, AK Textbook of physiology: textbook. Vol. 2/AK Jain. - 6nd ed. - Nev Delhi: Avichal publishing company, 2015. - 1121 p. Translation of title: Textbook of Physiology 22. 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 Tg. Translation of the title: Porth's Pathophysiology: Concepts of Altered Health States 23. Pathophysiology. Volume 1. : the book for medical institutes / AD Ado [and others]. - Almaty: "Evero", 2017. - 216 p. 24. Pathophysiology. Volume 2. : the book for medical institutes / AD Ado [and others]. - Almaty: "Evero", 2017. - 188 p. 25. Pathophysiology. Volume 3. : the book for medical institutes / AD Ado [and others]. - Almaty: "Evero", 2017. - 323 p. 26. Pathophysiology of Disease: An Introduction to Clinical Medicine. 7rd. ed. McGraw-Hill Education, 2014	
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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		47 / 11
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)		45p. from 52

	27. Kharisova, NM Physiology of the digestive system: teaching textbook / NM Kharisova. - Almaty: Evero, 2016. - 428 p. Additional: 1. Pathological physiology. Also: pathophysiology. Guide to practical classes: textbook / V. V. Novitsky [f. b.]; ed. Bask. V. V. Novitsky, O. I. Urazova; Kaz. tiline aud. S. B. Zhutikova. - M.: GEOTAR - Media, 2014. - 768 bet.s. 2. Urazalina, N. M. Tapsyrmalary test. II-bolim. Birtektesdertikurdister: - Almaty: Evero, 2014. - 184 bet. 3. Zhautikova, S. B. Mamandandyrylgan pathology physiology courses: oku-adistemelik kuraly / S. B. Zhautikova, E. K. Omirbaeva; KR densaulyk saktau ministerligi; KMMU. - Karaganda: Residential complex "Aknur", 2013. - 268 bet. 4. Zhautikova, S. B. Pathological physiology of the situational situation: ocu-adistemelikkural. - Karaganda: Residential complex "AkNur 2013" 5. Pathophysiology. Tasks and test assignments: a teaching aid / edited by P. F. Litvitsky; Ministry of Education and Science of the Russian Federation. - ; Rec. State Educational Institution of Higher Professional Education "MMA named after I. M. Sechenov". - Moscow: GEOTAR-Media, 2013. - 384 p.: ill. 6. Rose, Alan G. Atlas of pathology. Macro- and microscopic changes in organs: atlas: trans. from English. edited by E. A. Kogan / Alan G. Rose; ed. E. A. Kogan. - M.: GEOTAR-Media, 2010. - 576 p. 7. Klatt, Edward C Robbins and Cotran Atlas of Pathology : textbook / Edward C. Klatt. - 3rd ed. - Philadelphia : Elsevier Saunders, 2014. - 587 p. - ISBN 978-1-4557-4876-1 : 33050.00 Tg. Translation of the title: Robbins and Cotran Atlas of Pathology Pathological anatomy: Main: 1. Akhmetov, Zh. B. Pathological anatomy. T.1: okulyk / Zh. B. Akhmetov. - Almaty: New book, 2022. - 360 bet. 2. Akhmetov, Zh. B. Pathological anatomy. T.2: okulyk / Zh. B. Akhmetov. - Almaty: New book, 2022. - 344 bet. 3. Robbins derttan negizderi (zhalp bolim). 1 : okulyk / ed. V. Kumar [w/w]. - / Kazakh tiline audargan K. Karymbaev; To the white ministers of the League. - Almaty: Evero, 2014. - 480 bet 4. Manekenova K.B. Pathology process men aurular morphology korinisterin salystyrmala sipattamasy. Oku kuraly. "Sky Systems" 2019 5. Akhmetov, Zh. B. Pathological anatomy: okulyk. - M.: "Litterra", 2016. - 792 bet p. 6. Strukov, A. I. Pathological anatomy: okulyk /. - M.: GEOTAR - Media, 2015. - 984 bet.
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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		47 / 11 46p. from 52	
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)			

	7. Pathology. Eki tomдық. Volume 1: okulyk / Ed. bass. M. A. Paltsev, Kaz. tel. room S. A. Apbasova. - M.: GEOTAR - Media, 2015. - 536 bet p. : ill. 8. Akhmetov, Zh. B. Pathological anatomy: okulyk / Zh. B. Akhmetov. - ; KP densaulyksaktauministerligi. - Almaty: Evero, 2014. - 700 bet. 9. Pathological anatomy. T.1. General pathology: textbook: in 2 volumes / ed. V. S. Paukova. - 2nd ed. add. - M.: GEOTAR - Media, 2020. - 720 p. 10. Pathological anatomy. T.2. Particular pathology: textbook: in 2 volumes / ed. V. S. Paukova. - 2nd ed. add. - M.: GEOTAR - Media, 2020. - 528 p. 11. Strukov, A. I. Pathological anatomy: textbook. - 6th ed., revised and enlarged. - M.: GEOTAR - Media, 2021. - 880 p. 12. Manekenova K.B. Comparative characteristics of morphological manifestations of pathological processes and diseases. Study guide. "Sky Systems" 2019 13. Esirkepov, M. M. Pathological anatomy of the genome: a textbook and visual aid - Karaganda: IP "Izd-vo AKNUR", 2013 14. Kumar, V. Robbins Basic Pathology: textbook / V. Kumar, AK Abbas, JC Aster. - 10th ed. - [S. l.]: Elsevier, 2017. - 930 p. 15. 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. . 16. Kumar, Vinay Robbins and Cotran. Pathologic Basis of Disease: south Asia edition. Vol. 1 / V. Kumar, Abyl K. Abbas, Jon C. Aster. - 9th ed. - [S. l.]: Reed Elsevier India private limmed, 2015. - 1391 p. Additional: 1. Pathological anatomy atlas: = Pathological anatomy: atlas: textbook. manual - M.: GEOTAR - Media, 2014. 2. Kismanova, G. N. Zhalpy pathology protsester nuskauy: oku kuraly / G. N. Kismanova. - Almaty: Evero, 2010. - 122 bet. 3. Povzun, S. A. Pathological anatomy in questions and answers: textbook / S. A. Povzun. - 3rd ed., revised and enlarged; Rec. GBOU HPE "First Moscow State Medical University named after I. M. Sechenov". - M.: GEOTAR - Media, 2016. - 176 p. - 4. Pathological Anatomy. Guide to Practical Classes: Textbook / Ministry of Education and Science of the Russian Federation. Rec. GBOU HPE "First Moscow State Medical University named after I.M. Sechenov"; Ed. by O. V. Zairatyants, L. B. Tarasova. - 2nd ed., corrected and enlarged. - M.: GEOTAR - Media, 2015. - 696 5. Pathological Anatomy. Guide to Practical Classes [Text]: study guide / ed. O. V. Zairatyants. - 2nd ed., corrected and supplemented. - M.: GEOTAR - Media, 2021. - 696 6. Tusupbekova, M. M. Clinical pathomorphology: monograph / M. M. Tusupbekova. - Almaty: Evero, 2016. - 184 p.
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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	47 / 11 47p. from 52
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)	

7. Tusupbekova, M. M. Morphological atlas of general pathological processes: a tutorial. - Almaty: Evero, 2016. - 164 p. 8. Moiseev, V. S. Acute heart failure: a guide / V. S. Moiseev, J. D. Kobalava. - M.: OOO "Medical Information Agency", 2012. - 328 p. 9. Rose, Alan G. Atlas of pathology. Macro- and microscopic changes in organs [Text]: atlas; trans. from English. edited by E. A. Kogan / Alan G. Rose; ed. E. A. Kogan. - M.: GEOTAR - Media, 2010. - 576 p. 10. Sinelnikov, A. Ya. Atlas of human microscopic pathology: textbook. - ; Rec. Textbook-methodical society on medical and pharmaceutical education of higher education institutions of Russia. - M.: New wave: Publisher Umerenkov, 2007. - 320 p. 11. Klatt, Edward C. Robbins and Cotran Atlas of Pathology: textbook / Edward C. Klatt. - 3rd ed. - Philadelphia: Elsevier Saunders, 2014. - 587 p. Klatt, Edward C. Robbins and Cotran Atlas of Pathology: textbook / Edward C. Klatt. - 3rd ed. - Philadelphia: Elsevier Saunders, 2014. - 587 p. Pharmacology Main: Pharmacology: оқы құралы = Pharmacology: textbook / G. M. Pichkhadze [t.b.]. - M.: "Litterra", 2016. - 504 bet Stikeeva, R. K. Pharmacology-1: okukuraly / R. K. Stikeeva. - Almaty: Evero, 2016. - 148 bet.s. Kharkevich, D. A. Fundamentals of Pharmacology: textbook. - M.: GEOTAR - Media, 2015. - 720 p. Alyautdin, R. N. Pharmacology: textbook. - M.: GEOTAR - Media, 2014. - 704 p. : Kharkevich, D. A. Pharmacology: okulyk. - M.: GEOTAR - Media, 2014. - 784 bet. Rakhimov, K. D. Pharmacology: okukuraly. - Almaty: Zhaniya-Poligraf Housing Society, 2014. - 554 bet.s. Ormanov, N. Zh. Pharmacology. 1-kitap: okulyk / N. Zh. Ormanov, L. N. Ormanova. - Almaty: Evero, 2013. - 656 bet.s. Ormanov, N. Zh. Pharmacology. 2-kitap: okulyk / N. Zh. Ormanov, L. N. Ormanova. - Almaty: Evero, 2013. - 512 bet.s. Pharmacology: textbook / ed. R. N. Alyautdina. - M.: GEOTAR - Media, 2013. - 832 + el. Katzung, Bertram G. Basic and Clinical Pharmacology: textbook / Katzung Bertram G. - 14 nd ed. - [S. l.]: McGraw-Hill education, 2018. - 1250 p. Goodman and Gilman's, A. The Pharmacological Basis of Therapeutics: textbook / Goodman & Gilman's A.; editor L.L. Brunton. - 13th ed. - New York: McGraw-Hill Education, 2018. - 1419 p.	
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ONTÜSTİK-QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		 SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
Department of Pathology and Forensic Medicine		47 / 11
Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology		48p. from 52
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)		

Whalen Karen Pharmacology: lippincott Illustrated reviews / Karen Whalen; ed.: Garinda Feild, Rajan Radhakrishnan. - 7th ed. - [sl]: Wolters Kluwer, 2019. - 593 p. Additional: Usmle Step 1. Pharmacology: Lecturer notes / D. Graig [et. al.]. - New York, 2019. - 321 p. - (Kaplan Medical) Pharmacology: nyskaulyk = Pharmacology: manual / G. M. Pichkhadze [t.b.]. - M.: "Litterra", 2017. - 640 bet p. Mashkovsky M.D. Medicines. 16th edition. revised, supplemented and corrected. M. Novaya Volna. 2017. – 1216 p. Daneker ulpalar aurularynyn pharmacotherapy: okulyk / Z. A. Kerimbaeva [zh.b.]. - Almaty: Evero, 2016. - 184 b. With. Microbes karsy darilerdin pharmacology: oku kuraly / T. A. Muminov [reinforced concrete]; Kaz. tel. room N. M. Maldybaeva. - Almaty: Liter Print. Kazakhstan, 2016. - 552 bet. With. Pharmacology of antimicrobial agents: a tutorial / T. A. Muminov. - Almaty: Liter Print. Kazakhstan, 2016. Pharmacology: a guide to laboratory classes: a textbook / edited by D. A. Kharkevich. - 6th edition, corrected and supplemented; Rec. educational and methodological association for medical and pharmaceutical education of universities in Russia. - M.: GEOTAR - Media, 2014. - 512 p. Rakhimov, K. D. Phytopharmacology. Pharmacology - Thesaurus. : oku kuraly = Phytopharmacology. Pharmacology - Thesaurus: textbook. allowance. - Almaty: Zhaniya-Poligraf Housing Society, 2015. – 528 Pharmacology of non-medical formulations: okulyk / M. Z. Shaidarov [f.b.]. - Astana: Aknur, 2014. - 398 bet. With. Fundamentals of Pharmacology with a Recipe: Textbook / M. Z. Shaidarov [et al.]. - Astana: Aknur, 2014. - 406 p. Zhaugasheva, S.K. Pharmacological glossary = Pharmacological glossary / сөздік = PHARMACOLOGIC GLOSSARY: dictionary. - 2nd ed. - Almaty: Evero, 2013. - 132 p. Askorytu agzalary aurularyn pharmacotherapy: oku kuraly/ N.Zh. Ormanov, G.Zh. Sadyrkhanova. 2013. Tynys alu zholdary arzalary aurularynyn pharmacotherapy.: oky kuraly/ N.Zh. Ormanov. 2013. Ormanov, N. Zh. Zhalpy recipe. Zhalpy pharmacology: okukuraly.- Shymkent: "RISO", 2013. - 76 bet.s. Ormanov, N. Zh. Pharmacological reference book of drugs (classification, nomenclature, mechanism of action and	
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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	47 / 11 49p. from 52
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)	

	indications for use): a teaching aid. - Almaty: Evero, 2013. - 138 p. Ormanov, N. Zh. Zhalpy recipe. Zhalpy pharmacology: okukuraly / KP densaulyk saktau ministerligi; OKMMA. - Almaty: Evero, 2012. - 102 bet.s. Ormanov, N. Zh. Pharmacotherapy. 1-kitap: okulyk / N. Zh. Ormanov, L. N. Ormanova. – Shymkent: SKGFA, 2012. Ormanov, N. Zh. Pharmacotherapy. II-kitap: okulyk / N. Zh. Ormanov, L. N. Ormanova. - Shymkent: OKMFA, 2012. Electronic resources Askorytu agzalary aurularynyn pharmacotherapy. [Electronic resource]: Okulik/Kerimbaeva Z.A., Ormanov N.Zh., Dzhakipbekova Z.K., Ormanov T.N. Shymkent, 2018 Kharkevitch, DA Pharmacology: [Electronic resource]textbook for medical students / DA Kharkevitch. - Electronic text data. (83.9 MB). - M.: GEOTAR - Media, 2017. Pharmacology: okukuraly / ed. bass. G. M. Pichkhadze = Pharmacology: [Electronic resource]textbook / edited by G. M. Pichkhadze. - Electronic text data. (43.0 Mb). - M.: "Litterra", 2016. Clinical and pharmacological approaches to perioperative antithrombotic therapy. Dyusembayeva N.K., 2016https://aknurpress.kz/reader/web/1560 Lecture course on pharmacology for students of the dental faculty. Stikeeva R.K., Koranova T.S., 2014https://aknurpress.kz/reader/web/1384 Aisina, R.A., Oryntaeva, M.D. Pharmacology with toxicology for the formulation section: Guidelines. - Kostanay: KSU named after. A. Baitursynova, 2012.http://rmebrk.kz/book/1024531 Kalieva Sh.S. Clinics of pharmacology and pharmacotherapy. Volume 2 – Okulyk / Sh.S.Kalieva, N.A. Simokhin, B.E. Tonkabaeva. – Almaty: “Evero” basspasy, 2020.https://www.elib.kz/ru/search/read_book/2799/ Ormanov N.Zh., Syrmanova N.R., Ormanova L.N. Zhalpy recipe. Zhalpy pharmacology-Almaty: Evero, 2020.https://elib.kz/ru/search/read_book/743/ Stikeeva R.K. Pharmacology - 1 - textbook. - R.K.Stikeeva.- Almaty: Evero, 2020.https://elib.kz/ru/search/read_book/2742/ Stikeeva R.K. Pharmacology-I.- oku kuraly.- Stikeeva R.K. – Almaty Evero.- 2020.https://elib.kz/ru/search/read_book/2741/ Ormanov N.Zh., Ormanova L.N. Pharmacology-1. Almaty. "Evero" ZhS. 2020.https://elib.kz/ru/search/read_book/735/ Ormanov N.Zh., Ormanova L.N. Pharmacology-2. "Evero" ZhShS. Almaty, 2020.https://elib.kz/ru/search/read_book/736/ Pharmacology: oku kuraly / B. D. Aitzhanov, N. A. Zamanbekov, A. M. Otenov [etc.]; edited by B. D. Aitzhanov. -
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ONTÜSTIK-QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ	
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Department of Pathology and Forensic Medicine Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology	47 / 11 50p. from 52
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)	

	Almaty: Nur-Print, 2014. - 495 p. - :https://www.iprbookshop.ru/67173. Malevannaya, V. N. General pharmacology: a textbook / V. N. Malevannaya. - 2nd ed. - Saratov: Scientific book, 2019. - 159 p.: https://www.iprbookshop.ru/81075. Shilova, N. V. Antibacterial drugs: a teaching aid / N. V. Shilova, A. Yu. Savchenko, N. S. Dubovik. - Moscow: National Research Nuclear University MEPhI, 2023. - 32 p. - https://www.iprbookshop.ru/141169. Fitilev, S. B. General pharmacology (fundamentals of clinical pharmacokinetics and pharmacodynamics): a textbook / S. B. Fitilev, I. I. Shkrebneva, V. K. Lepakhina. - Moscow: Peoples' Friendship University of Russia, 2008. - 112 p. - :https://www.iprbookshop.ru/11578. Vallance, Patrick; Smart, Trevor G. The future of pharmacology. British Journal of Pharmacology, 2006, //eBook Collection EBSCO
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12. Discipline Policy

Requirements for students, attendance, behavior, grading policies, 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;
- maintain personal hygiene (short and clean nails, clean and ironed medical uniform, special change of shoes)
- 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 conscientiously for classes and lectures;
- 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

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 SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»	
Department of Pathology and Forensic Medicine Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology	47 / 11 51p. from 52
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)	

– 1 point for each missed lecture;

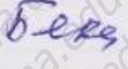
- If you miss a SIW without a valid reason, your midterm assessment score will be reduced by 2 points for each missed lesson;
- In case of a single violation of the discipline policy, the student is given a warning;
- In case of systematic violation of the discipline policy, information about the student's 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 assessments (RC 1, RC 2, average assessment of the current assessment) is not admitted to the final assessment for the discipline.

13.	Academic policy based on moral and ethical values of JSC "UKMA"
	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

ONTÜSTIK-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		47 / 11 52p. from 52
Working curriculum of the discipline "Blood and lymph in pathology" (Syllabus)		

14. Coordination, approval and revision			
Date of agreement with the Library and Information Center	Protocol No.	Full name of the head of the LIC	Signature
«25» 06 2025	N 7	Darbicheva R.I.	
Date of approval at the department	Protocol No.	Full name of the head	Signature
«26» 06 2025	N 11	Department of "Propaedeutics of Internal Diseases" MD, Professor Bekmurzaeva E.K.	
«26» 06 2025	N 13	Department of Pathology and Forensic Medicine, MD, Acting Professor Sadykova A. Sh.	
«26» 06 2025	N 11	Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology PhD, Associate Professor, Acting Professor Toksanbaeva Zh. S.	
Date of approval for AK OP	Protocol No.	Full name of the Chairman of the AK OP	Signature
«21» 06 2025	N 6	Auezhankyzy D.	