


<p style="text-align: center;">OÑTÜSTİK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ</p>		<p style="text-align: center;">SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»</p>
<p style="text-align: center;">Department of "Normal Anatomy" Department of "Normal and Pathological Physiology" Department of "Pathological Anatomy and Histology" Department of "Biology and Biochemistry" Department "Introduction to the clinic"</p>		<p style="text-align: right;">42/11 45/11 46/11 75/11</p>
<p style="text-align: center;">Syllabus of discipline</p>		<p style="text-align: right;">Page from</p>

Syllabus

Department of "Normal Anatomy"
Department of "Normal and Pathological Physiology"
Department of "Pathological Anatomy and Histology"
Department of "Biology and Biochemistry"
Department "Introduction to the clinic"

Working curriculum of the discipline "Blood and lymph are normal" Educational program: 6B10115 "Medicine"

1.	General information about the discipline		
1.1	Discipline code: KLN 2210	1.6	Academic year:2023-2024
1.2	Name of discipline:“Blood and lymph are normal.”	1.7	Kours: 2
1.3	Prerequisites:Introduction to the profession, Structural organization of human physiological processes.	1.8	Semester: 3
1.4	Postrequisites: Blood and lymph in pathology	1.9	Number of credits (ECTS): 3/90
	Cycle: BD	1.10	Component: UC
2.	Description of the discipline		
Morphofunctional and biochemical features of blood and lymph, general methods of examining a patient with diseases of the hematopoietic and lymphatic systems. Types and interpretations of blood tests.			
3.	Summative Assessment Form		
3.1	<input checked="" type="checkbox"/> Testing	3.5	Coursework
3.2	Writing	3.6	Essay
3.3	Oral	3.7	Project
3.4	<input checked="" type="checkbox"/> OSPE/OSKE or practical skills reception	3.8	Other (specify)
4.	Goals of the discipline		
Formation in students of a complex of knowledge and understanding of the morphophysiology of blood and lymph, about the basic patterns of metabolic processes that determine the state of health and adaptation of a person at the cellular, tissue and organ level of the whole organism, as well as skills in clinical and laboratory research methods, pre-medical care and patient - centered care.			
5.	Final learning outcomes (module LO)		
LO1	demonstrates knowledge of the structures and general patterns of structure and functioning of cells, tissues, hematopoietic organs and lymphatic systems, their regulatory mechanisms, considered from the standpoint of general physiology and integrative human behavioral activity;		
LO 2	demonstrates knowledge of the basic metabolic processes occurring in tissues, the mechanisms of their regulation at the cellular level and the possible consequences of their disruption. Knows the basic biochemical constants of biological fluids of the human body in normal conditions		
LO3	shows readiness to collect and analyze the patient’s complaints, his medical history, examination results, laboratory, instrumental and other studies in order to recognize the condition or establish the presence or absence of the disease for monitoring and caring for patients		
LO4	Demonstrates: own knowledge and skills when conducting biochemical, morphophysiological studies; the ability to conduct a literature search and analysis of scientific articles in independent study of the discipline; ability to work in a team. Has an understanding of modern biochemical, morphofunctional approaches in the diagnosis of human diseases. Takes advantage of opportunities to stay informed about new discoveries and techniques		

<p style="text-align: center;"> ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		 <p style="text-align: center;"> SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
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<p style="text-align: center;">Syllabus of discipline</p>		<p>Page from</p>

5.1	LO disciplines	EP learning outcomes with which LO disciplines are associated
	LO 1	LO 1 – Provides patient-centered care in the field of biomedical, clinical, epidemiological and socio-behavioral sciences for the most common diseases.
	LO 2	
	LO 3	
	LO 4	LO 4 –Conducts effective measures aimed at diagnosing, treating, and preventing common and early forms of diseases.


6. Detailed information about the discipline

6.1	<p>Location of the Department of Morphophysiology - pl. Al-Farabi 1, main academic building, ground floor; internal tel. – 40-82-22, 40-82-26 (263), e-mail anatomy.2012@mail.ru. Email address: www.ukma.kz. histology: Shymkent, st. Al-Farabi 3, educational building №2, 4th floor; audiences – №404 a, b; №406; №408; №409, №411 a, b. Department e-mail: Patan.gisto@mail.ru</p> <p>Physiology: Shymkent, sq. Al-Farabi, educational building №2, 4-5 floor; tel.40-82-26 (422.423);</p> <p>Department of Biology and Biochemistry:pl. Al-Farabi 1, main academic building, 4th floor</p> <p>Department of “Introduction to the Clinic”: Shymkent, Shymkent City Multidisciplinary Hospital, №2, st. Zhandosova, 92/9 (modular) email address – klinika.skma@mail.ru.</p>					
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6.2	Number of hours	Lectures	Pract.	Lab.	SIWP	SIW
		6	24	-	18	42

6.3 Discipline study plan


№	Discipline	Lecture	Prak	SIWP	SIW	Number of hours	
1 day	Anatomy	-	1	1	3		
	Physiology	-	-	1	3		
	Histology	-	-	-	-		
	Biochemistry	1	2	-	-		
	Introduction to the clinic	-	-	-	-		
2 day	Anatomy	1	1	-	-		
	Physiology	-	-	-	-		
	Histology	-	-	1	3		
	Biochemistry	-	2	-	-		
	Introduction to the clinic	-	-	1	3		
Day 3	Anatomy	-	-	-	-		
	Physiology	1	1	-	-		
	Histology	-	1	-	-		
	Biochemistry	-	-	2	4		
	Introduction to the clinic	-	1	-	-		
4 day	Anatomy	-	1	1	2		
	Physiology	-	-	1	2		
	Histology	-	-	-	-		
	Biochemistry	1	2	-	-		
	Introduction to the clinic	-	-	-	-		
5 day	Anatomy	-	-	-	-		
	Physiology	-	1	-	-		
	Histology	1	1	-	-		
	Biochemistry	-	-	2	5		
	Introduction to the clinic	-	1	-	-		
Day 6	Anatomy	-	1-	-	-		
	Physiology	-	-	-	-		
	Histology	-	-	1	2		
	Biochemistry	-	2	-	-		
	Introduction to the clinic	1	-	1	2		
Day 7	Anatomy	-	-	-	-		
	Physiology	-	1	1	2		
	Histology	-	1	1	2		
	Biochemistry	-	-	-	-		
	Introduction to the clinic	-	1	1	2		
Day 8	Anatomy	-	-	1	2		
	Physiology	-	1	-	-		
	Histology	-	1	-	-		
	Biochemistry	-	-	2	5		
	Introduction to the clinic	-	1	-	-		

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Syllabus of discipline		Page from

1	Anatomy	-	-	-	-	0.5cr	3 credit – 90 hours Lecture-6, Practical classes - 24 hours SIWP-18h. SIW-42h.
2	Physiology	-	-	-	-	0.5cr	
3	Histology	-	-	-	-	0.0cr	
4	Biochemistry	-	-	-	-	1.0cr	
5	Introduction to the clinic	-	-	-	-	0.5cr	
7.	Information about teachers						
№	FULL NAME	Degrees and position	Email address	Scientific interests, etc.			Achievements
1.	Tanabaev Baymakhan Dilbarkhanovich	Head of Department, Ph.D., acting professor	b.tanabayev@mail.ru	The direction of scientific research is “Macro-microhemocirculatory bed of the pelvic organs during ligation of the internal iliac arteries.”			Gives lectures and conducts practical classes on anatomy in Kazakh and Russian.
2.	Murzanova DinarAlpenovna	Ph.D., Acting professors	dina.murzanova@gmail.com	The direction of scientific research is “Adam anatomysyndagyishkiarzaatularynyngulityksipaty.			Gives lectures and conducts practical classes on anatomy in Kazakh, Russian and English.
3.	Turekulova Akzharkyn Kenesovna	Senior teacher, master	jarkin-74@mail.ru	The direction of scientific research is “Ystyk climate zhagdayynda korgasynyn arterial main lines kabyrgasynyn kurylymyna tigizetin aseri.”			Gives lectures and conducts practical classes on anatomy in the Kazakh language.
4	Ospanov Daken Tolenovich	Senior teacher	dakenospanov@list.ru				Gives lectures and conducts practical classes on anatomy in the Kazakh language.
5	Dzhubanishbaeva Gaukhar Niyazkulovna	Senior teacher, master	gaukharai_kairat@mail.ru	Direction of scientific research – “MƏMS endiru barysyndagy profilaktikalyk zhumysynyn maselelerin aykyndau”			Gives lectures and conducts practical classes on anatomy in the Kazakh language.
1.	Sisabekov Kasymkhan Ermekbaevich	Professor, Doctor of Medical Sciences	sisabekov47@mail.ru	“Neuroimmunogenesdin zhergilikty mechanismderinin morphology and negligence.”			Gives lectures and conducts practical classes on histology in Kazakh and Russian.
2.	Zhumashev Seydaly Nurakhovich	Acting professor, doctor of medical sciences	sult_med@mail.ru	Scientific direction: “Study of the morphological structure of hemo-immunopoiesis”			Gives lectures and conducts practical classes on histology in Kazakh and Russian.
3.	Toimbetova Karlygash Abibullaevna	senior teacher	tojmbetova71@mail.ru	Scientific direction: "neuromorphology"			Gives lectures and conducts practical classes on histology in Kazakh and Russian languages
4.	Duysembieva Zhazira Merevyzy	teacher	zhazira-0508@mail.ru	Conducts research work on the topic “Ontustik			Conducts practical classes on histology

<p style="text-align: center;">OÑTÜSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ</p>			<p style="text-align: center;">SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»</p>
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<p style="text-align: center;">Syllabus of discipline</p>			

				Kazakstan aimagyndagy turgyndardyn salauatty omir saltyn kalypstastyrudyn gylymi negizderi.”	in the Kazakh language.
5.	Zhakupbekova Galiya Saparovna	head department, PhD, Acting professors	Galiya_074@mail.ru	“The influence of bioslastilin on the processes of lipid peroxidation in hepatocytes and blood plasma during phosphorus intoxication” Takyryp Boyynsha Zhumysy Zhurgizedi, candidate of dissertation of Korgada.	Author of 35 scientific publications, prepared 1 pre-patent, 1 patent.
6.	Satybaldieva Nazgul Mutalkhanovna	master, senior teacher	n_a_z_i_92@mail.ru	Conducts research work on the topic “Tynyszhuyesiaurularynantu yndaytynmugedektiktinaleum ettik-medicinalykmaseleleri”. Author of 11 scientific publications.	Gives lectures and conducts practical classes in physiology in Kazakh and Russian.
7.	Murina Natalya Mikhailovna	senior teacher	namuri12@mail.ru	Author of 9 scientific publications.	Gives lectures and conducts practical classes in physiology in Kazakh and Russian.
8.	Azimbaeva Saule Nurmakhanovna	master, senior teacher	saule.a@mail.ru	Author of 7 scientific publications.	Gives lectures and conducts practical classes in physiology in Kazakh and Russian
	Biochemistry				
1	Kenzhebekov P.K.	Ph.D., professor	kenzhebekov.p@gmail.com	"Study of the chemical composition of volatile aroma-forming compounds in some meat products"	Author of 42 scientific publications, 1 textbook
2	Ordabekova A.B	Master of Biology, senior teacher	asmira75@mail.ru	"Microelementoses"	Author of 20 scientific publications, 1 textbook
3	Asilbekova G.K.	Master of Biology, senior teacher	shahats@mail.ru	"Microelementoses"	Author of 10 scientific publications, 1 textbook
4.	Kanzhigitova M.Zh.	Master of Biology, senior teacher	Molya_1503@mail.ru		Author of 9 scientific publications, 1 textbook
5.	Beisebaeva L.M.	senior teacher	lyzzatb70@list.ru	“Organization of clinical diagnostic laboratory service in modern conditions in the Republic of Kazakhstan”	Author of 4 scientific publications
6.	Zhienbaeva A.	teacher			1 scientific

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<p style="text-align: center;">Syllabus of discipline</p>		<p>Page from</p>

					publication
	Introduction to the clinic				
1	Zhumadilova Akmaral Rakhmatullaevna	Head of the department, candidate of medical sciences, acting associate professor	akmaral-arau@mail.ru	Doc topic: features of the formation of the reproductive system of teenage girls living in the area of influence of organochlorine pesticides. Author of more than 40 scientific and scientific-methodological publications, 6 textbooks.	Gives lectures and conducts classes in Kazakh and Russian.
2	Ababakirova Dilsara Talibbaevna	assistant	dilsara_ababakirova@mail.ru	Innovative technology in the treatment of uterine fibroids	Gives lectures and conducts classes in Russian, Kazakh and English.
3	Ermolaeva Olga Aleksandrovna	assistant	Olga83_07@mail.ru	Author of more than 40 scientific publications, 1 textbook in Russian and English.	Gives lectures and conducts classes in Russian and Kazakh languages.

Department of "Normal Anatomy"

Department of "Normal and Pathological Physiology"

Department of "Pathological Anatomy and Histology"

Department of "Biology and Biochemistry"

Department "Introduction to the clinic"

Syllabus of discipline

42/11

45/11

46/11

75/11

Page from

Day	Lesson form	Topic name	Summary	LO module	Number of hours	Forms/methods/ educational technologies	Forms/assessment methods
1 day	Anatomy. Practical lesson №1.	Organshematopoiesis and immune system.	Central and peripheral organs of the immune system. Bone marrow. Thymus. Spleen. Tonsils. The lymph nodes.	LO1 LO4	1	Work in small groups with anatomical preparations, torsos, dummies, tables, tablets, posters on the interactive panel "Pirogov" and/or solving test and situational problems	Oral questioning, evaluation sheet, solving situational problems, evaluation sheet, completing test tasks
	Anatomy of SIWP	Lymphatic vessels, head and neck nodes.	Lymphatic vessels, head and neck nodes.	LO1 LO4	1/3	Working with educational literature, passing the SIW in the form of: -presentation	Oral survey. Evaluation sheets for all forms of completed assignments.
	Physiology of SIWP	SIWP. 1 SIW Physiological basis of blood transfusion. Blood transfusion.	Blood groups and physiological basis of blood transfusion. Blood transfusion.	LO1	1/3	Preparation and defense of the presentation	Review and protect your presentation
	Biochemistry lecture №1	Biochemistry of blood.	Biochemistry of blood.	LO1	1	Overview	Feedback Questions
	Biochemistry practice №1	Blood functions. Laboratory work:	Composition and biological functions of blood. Blood plasma proteins. Blood plasma enzymes. Quantitative determination of total protein in blood serum.	LO1 LO2	2	Seminar, situational tasks, testing, laboratory work	Check list
2 day	Anatomy. lecture	General morphology of the lymphatic system and its role in the body. The	Thoracic duct. Right lymphatic duct. Lymphatic vessels and nodes of individual areas of the body. Patterns of distribution of lymphatic	LO1	1	Overview	Feedback Questions

Department of "Normal Anatomy"

Department of "Normal and Pathological Physiology"

Department of "Pathological Anatomy and Histology"

Department of "Biology and Biochemistry"

Department "Introduction to the clinic"

Syllabus of discipline

42/11

45/11

46/11

75/11

Page from

		main links of this system and their structure.	vessels and nodes.				
	Anatomy Practical lesson №2	General morphology of the lymphatic system. The main links of this system and its structure.	Lymphatic vessels. Thoracic and right lymphatic duct.	LO1 LO4	1	Work in small groups with anatomical preparations, torsos, dummies, tables, tablets, posters on the interactive panel "Pirogov" and/or solving test and situational problems	Oral questioning, evaluation sheet, solving situational problems, evaluation sheet, completing test tasks
	Histology of SIWP	Hemogram. Leukocyte formula.	An idea of the hemogram and leukocyte formula, their age and gender characteristics. Lymph.	LO1, LO2	1/3	Work in small groups, presentation defense compiling a glossary.	Checklist for SIW assessment
	Biochemistry practice №2	Red blood cells and hemoglobin. Laboratory work:	Red blood cells and hemoglobin. Respiratory regulation of extracellular fluid pH. Transport function of blood for the transport of carbon dioxide and oxygen, as well as buffer properties. Quantitative determination of urea in blood serum.	LO1 LO2	2	seminar, situational tasks, testing, laboratory work	Check list
	Introduction to the clinic. SIWP/SIW 1.	Types and interpretation of blood tests.	Preparing the patient to donate blood for analysis. General blood analysis. Blood chemistry. Blood test indicators in adults. Interpretation of blood tests		1/3	Working with electronic information resources. Preparation of presentations, crossword puzzles, preparation of mind maps, preparation of test tasks.	Protection of presentations, smart cards, test tasks.
3d ay	Physiology lecture	Lecture. Physiology of blood.	Physiology of blood. Composition of blood, blood formed elements and	LO1	1	Overview	Feedback Questions

Department of "Normal Anatomy"

Department of "Normal and Pathological Physiology"

Department of "Pathological Anatomy and Histology"

Department of "Biology and Biochemistry"

Department "Introduction to the clinic"

Syllabus of discipline

42/11

45/11

46/11

75/11

Page from

		Composition of blood, blood formed elements and their functions.	their functions. Hemostasis.				
Physiology practice №1	Practical lesson. 1 General characteristics of body fluids. Physiology of blood. ESR. Hemolysis.	The concept of the internal environment of the body. General physical and chemical properties of blood. Quantity, functions, composition of blood. Formed elements of blood. ESR. Hemolysis and its types.	LO1	1	discussing the main issues of the topic, performing practical work, completing test tasks, solving situational problems	Oral questioning, assessment of practical work, assessment of test tasks, assessment of solutions to situational problems	
Histology practice №1	Blood and lymph1	Morphofunctional characteristics of blood as tissue. Cytofunctional features of erythrocytes and blood platelets.	LO1, LO2	1	Work in small groups, checklist of histo-preparations and microphotographs	Practical lesson assessment checklist.	
Biochemistry SIWP №1	The most important metabolites of carbohydrate metabolism.	The most important metabolites of carbohydrate metabolism. Diagnostic value of determination of metabolites of carbohydrate metabolism.	LO1, LO2	2/4	presentation, analysis of scientific articles on the topic, glossary	assessment of the quality of design and level of protection of the presentation, assessment of understanding, ability to analyze a scientific article and the formation of certain scientific concepts	
Introduction to the clinic. Practical lesson 1.	General methods of examining a patient with diseases of the	Anamnesis. Examination Complaints: weakness, dizziness, palpitations, shortness of breath, fatigue, changes in appetite (loss or perversion of appetite),	LO3, LO4	1	Work in small groups. Completing test tasks, solving	Oral questioning, assessment of test task performance,	

Department of "Normal Anatomy"

Department of "Normal and Pathological Physiology"

Department of "Pathological Anatomy and Histology"

Department of "Biology and Biochemistry"

Department "Introduction to the clinic"

Syllabus of discipline

42/11

45/11

46/11

75/11

Page from

		hematopoietic system	changes in sense of smell, fever, fainting, itching, paresthesia, unsteadiness of gait.			clinical problems, performing practical work	assessment of clinical problem solving, assessment of practical work. Checklists "Intradermal injection", "Subcutaneous injection", "Intravenous injection", "Intramuscular injection"
4d ay	Anatomy practical lesson №3	Lymphatic vessels, nodes of the walls and organs of the chest cavity	Lymphatic vessels, nodes of the walls and organs of the chest cavity.	LO1 LO4	1	Work in small groups with anatomical preparations, torsos, dummies, tables, tablets, posters on the interactive panel "Pirogov" and/or solving test and situational problems	Oral questioning, evaluation sheet, solving situational problems, evaluation sheet, completing test tasks
	Anatomy of SIWP/SIW2	Lymphatic vessels, nodes of the walls and organs of the pelvic cavity, upper and lower extremities	Lymphatic vessels, nodes of the walls and organs of the pelvic cavity, upper and lower extremities	LO1 LO4	1/2	Working with educational literature, passing the SIW in the form of: -presentation	Oral survey. Evaluation sheets for all forms of completed assignments.
	Physiology of SIWP	SIWP. 2 SIW Immunity. Types of immunity.	Cellular nonspecific immunity. Specific immunity. Lymphocytes. Phases of the immune response. Antigens. Antibodies. Immunological surveillance. The role of the thymus, spleen, lymph nodes. Basic methods for studying the immune system organs.	LO1	1/2	Preparation and defense of the presentation	Review and protect your presentation

	Biochemistry lecture №2	Blood coagulation and hemostasis mechanisms.	Blood coagulation and hemostasis mechanisms.	LO1	1	Overview	Feedback Questions
	Biochemistry practice №3	Blood coagulation and fibrinolysis. Laboratory work:	Blood coagulation and fibrinolysis. Activation of blood clotting. Internal and external pathways of blood coagulation. Quantitative determination of iron in blood serum.	LO1 LO2	2	Seminar, situational tasks, testing, laboratory work	Check list
5d ay	Physiology Practical lesson №2	Practical lesson. 2 Leukocytes. Platelets. Blood groups/ABO system, Rh affiliation.	Quantity, functions, composition of blood. Leukogram. Hemostasis. Characteristics and methods for determining blood group/ABO system, Rh-type.	LO1	1	Preparation of an abstract with checking for plagiarism, preparation and defense of a presentation	Checking the abstract for plagiarism, defending the presentation
	Histology lecture	Blood and lymph.	Morphofunctional characteristics of blood as tissue. Cytofunctional features of erythrocytes and blood platelets, leukocytes.	LO1	1	overview	Answers to security questions.
	Histology Practical lesson №2	Blood and lymph2.	Morphofunctional characteristics of blood as tissue. Cytofunctional features of the structure of granulocytes and agranulocytes.	LO1, LO2	1	Work in small groups, checklist of histo-slides and microphoto graphs	Practical lesson assessment checklist.
	Biochemistry of SIWP	The most important metabolites of lipid metabolism.	The most important metabolites of lipid metabolism. Diagnostic value of determination of metabolites of deep metabolism.	LO1 LO2	2/5	presentation, essay, glossary	assessment of the quality of design and level of protection of the presentation and essay writing
	Introduction to the clinic. Practical lesson 2.	Examination algorithm and patient preparation	Algorithm for examining a patient for a blood test. Preparing the patient for the blood donation procedure.		1	Work in small groups. Discussion of topic issues, performing	Oral questioning, assessment of test task performance,

Department of "Normal Anatomy"

Department of "Normal and Pathological Physiology"

Department of "Pathological Anatomy and Histology"

Department of "Biology and Biochemistry"

Department "Introduction to the clinic"

Syllabus of discipline

42/11

45/11


46/11

75/11


Page from

		for testing.	Rules for taking a blood test for biochemistry, sugar, hormones			test tasks, solving clinical problems, performing practical work	assessment of clinical problem solving, assessment of practical work.
6d ay	Anatomy Practical lesson №4	Lymphatic vessels, nodes of the walls and organs of the abdominal cavity	Lymphatic vessels, nodes of the walls and organs of the chest cavity.	LO1 LO4	1	Work in small groups with anatomical preparations, torsos, dummies, tables, tablets, posters on the interactive panel "Pirogov" and/or solving test and situational problems	Oral questioning, evaluation sheet, solving situational problems, evaluation sheet, completing test tasks
	Histology of SIWP	Histology SIWP/SIW 2 Postembryonic hematopoiesis	The main sources and stages of the formation of blood-creating organs and immune defense. Features of postembryonic hematopoiesis. The concept of postembryonic immunopoiesis.	LO1, LO2	1/2	Work in small groups, presentation defensecompiling a glossary.	Checklist for SIW assessment
	Biochemistry practice №4	Anticoagulant blood system. Laboratory work:	Anticoagulant blood system. Serine protease inhibitors. Antiprombin III. Protease nexin-1. Tissue factor inhibitor.quantitation gland into blood serum.	LO1 LO2	2	Seminar, situational tasks, testing, laboratory work	Check list
	Introduction to the clinic. Lecture 1.	Blood: general characteristics . Blood research methods. Lymphatic system, its function. The lymph nodes. Palpation of lymph nodes.	Blood: general characteristics. Blood components. Blood research methods. Lymph: mechanism of formation, volume, functions of lymph. Composition of lymph. Palpation of lymph nodes.	LO1	1	Review lecture	Feedback
	Introduction to the clinic. SIWP/SIW 2.	Diagnosis and examination of enlarged	Target. Preparing the patient for the procedure.Examination of a	LO3 LO4	1/2	Completing test tasks, solving clinical	Evaluation of test task performance, evaluation of

		lymph nodes	patient with enlarged lymph nodes			problems, performing practical work	clinical problem solving, procedure completion checklist
7d ay	Physiology Practical lesson №3	Practical lesson.3 Physiology of hematopoietic organs.	The role of red bone marrow, thymus, spleen, liver, lymph nodes in the process of hematopoiesis. Basic clinical and hematological methods for studying the hematopoietic organs.	LO1	1	discussing the main issues of the topic, performing practical work, completing test tasks, solving situational problems	Oral questioning, assessment of practical work, assessment of test tasks, assessment of solutions to situational problems
	Physiology of SIWP	SIWP. 3 SIW Blood groups/ABO system, Rh affiliation. Rules for blood transfusion. Blood replacement solutions.	Characteristics and methods for determining blood group/ABO system, Rh-type. Methods of blood transfusion. Characteristics of blood replacement solutions.	LO1	1/2	Preparation and defense of the presentation	Review and protect your presentation
	Histology practical lesson №3	Histology Embryonic hematopoiesis.	Features of embryonic hematopoiesis and its main stages.	LO1, LO2	1	Work in small groups, checklist of histo-slides and microphotographs	Practical lesson assessment checklist.
	Histology of SIWP	Histology SIW P/SIW 3 Cellular basis of immunity.	Cellular interactions in immune reactions.	LO1, LO2	1/2	Work in small groups, presentation defensecompiling a glossary.	Checklist for SIW assessment
	Introduction to the clinic. Practical lesson 3.	Algorithms for blood sampling using the Vacutainer vacuum	Target. Equipment. Preparing for the procedure. The procedure for collecting in test tubes. Features of a nurse's work under conditions of risk of	LO3 LO4	1	Completing test tasks, solving clinical problems, performing practical work	Evaluation of test task performance, evaluation of clinical problem solving,

<p style="text-align: center;"> ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>			<p style="text-align: center;"> SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
<p style="text-align: center;"> Department of "Normal Anatomy" Department of "Normal and Pathological Physiology" Department of "Pathological Anatomy and Histology" Department of "Biology and Biochemistry" Department "Introduction to the clinic" </p>		<p style="text-align: center;">Syllabus of discipline</p>	<p>42/11 45/11 46/11 75/11 Page from</p>

		system.Organ ization of labor safety with blood	contracting viral and bacterial infections transmitted through the patient's blood and other biological fluids.				procedure completion checklist
	Introduction to the clinic. SIWP/SIW 3.	Frontier control.	Consolidation of the material covered on the topics of lectures, practical classes, SIWP and SIW.		1/2	Testing	Checklist for assessing SIW.
8d ay	Anatomy SIWP\SIW3	Lymphatic vessels, nodes of the walls and organs of the pelvic cavity, upper and lower extremities	Lymphatic vessels, nodes of the walls and organs of the pelvic cavity, upper and lower extremities	LO1 LO4	1/2	Working with educational literature, passing the SIW in the form of: -presentation	Oral survey. Evaluation sheets for all forms of completed assignments.
	Physiology practical lesson №4	Practical lesson.4 Physiology of the lymphatic system.	Functions of the lymphatic system. Composition of lymph. Lymph formation. Lymphatic drainage Functions of red bone marrow, thymus, liver, spleen and lymph nodes.	LO1	1	discussing the main issues of the topic, performing practical work, completing test tasks, solving situational problems	Oral questioning, assessment of practical work, assessment of test tasks, assessment of solutions to situational problems
	Histology practical lesson №4	Histology Pract ical lesson № 4 Organs of hematopoiesis and immunogenesi s.	Morphofunctional characteristics of hematopoietic organs. Classification, sources and progress of development. Red bone marrow. Thymus. The lymph nodes. Spleen	LO1, LO2	1	Work in small groups, checklist of histo-slides and microphotogra phs	Practical lesson assessment checklist.
	Introduction to the clinic. Practical lesson 4.	Groups of lymph nodes available for examination.	Groups of lymph nodes available for examination: occipital, parotid, cervical, submandibular, chin, subclavian,supraclavicular, axillary,elbows,inguinal Lymph node assessment: dimensions (in cm), form,consistency,mobility, soreness and adhesion to surrounding tissues.	LO3 LO4	1	Completing test tasks, solving clinical problems, performing practical work	Assessment of test task performanc e,assessment t of clinical problem solving

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Department of "Normal Anatomy"		42/11
Department of "Normal and Pathological Physiology"		45/11
Department of "Pathological Anatomy and Histology"		
Department of "Biology and Biochemistry"		46/11
Department "Introduction to the clinic"		75/11
Syllabus of discipline		Page from

	Biochemistry SIWP ME	Metabolites of protein and amino acid metabolism. Midterm exam	Diagnostic value of determination of metabolic metabolites. proteins and amino acids. Midterm exam according to the system.	LO1 LO2	2/5	presentation, essay, glossary Midterm exam: control questions, test tasks, situational tasks.	assessment of design quality and level of protection presentation and essay writing assessment of answers to control questions, test tasks and solutions to situational problems

9.	Training methods and forms of control	
9.1	Lectures	introductory, overview lecture. <u>form of control</u> : Feedback (control questions)
9.2	Practical lessons	work in small groups with anatomical preparations, with a skeleton, skull, models, tablets, posters, on the interactive anatomical table "Pirogov" and/or solving test and situational (clinical) tasks, discussing the main issues of the topic, filling out a checklist of histological preparations and microphotographs, seminar, performing practical skills, discussion, working with radiological images. <u>Form of control</u> : Oral questioning with demonstration of anatomical structures on the torso, tablets, posters, interactive anatomical table "Pirogov" and/or solving test tasks and situational (clinical) problems, checklist for assessing a practical lesson, assessing crossword puzzles, assessing practical skills, assessing the description of radiological pictures.
9.3	SIW/SIWP	Consultation on the most complex issues of the curriculum when performing SIW, working with educational literature, preparing a presentation, sketching a diagram of the passages of nerves, arterial, venous and lymphatic vessels; preparation of glossary, smart map, solution situational tasks, discussion of the results of radiological studies, conducting midterm exam, <u>Form of control</u> : Evaluation sheets for certain forms of completed assignments
9.4	Midterm exam	in writing - solving integrated situational problems <u>form of control</u> : assessment of the performance of integrated situational tasks.

10	Evaluation criteria					
10.1	Criteria for assessing the results of the discipline					
	№.	Name of learning outcomes	unsatisfactorily	Satisfactorily	Fine	Great

Department of "Normal Anatomy"

Department of "Normal and Pathological Physiology"

Department of "Pathological Anatomy and Histology"

Department of "Biology and Biochemistry"

Department "Introduction to the clinic"

Syllabus of discipline

42/11

45/11

46/11

75/11

Page from

LO					
LO1	demonstrates knowledge of the structures and general patterns of structure and functioning of cells, tissues, hematopoietic organs and lymphatic systems, their regulatory mechanisms, considered from the standpoint of general physiology and integrative human behavioral activity;	Does not know the structure, functions, cells, tissues, hematopoietic organs and lymphatic systems, their regulatory mechanisms, and the chemical composition and biological functions of body tissues	1. Makes gross mistakes when describing structures and general patterns of the structure and functioning of cells and tissues. blood-forming organs and lymphatic systems, their regulatory mechanisms. 2. Makes gross mistakes when describing organs on models, wet anatomical preparations and the interactive panel of Pirogov.	1. Knows the structure, functions, cells, tissues, blood-forming organs and lymphatic systems, their regulatory mechanisms, and the chemical composition and biological functions of body tissues, has difficulty using anatomical terminology 2. Shows the main parts of organs on dummies, wet anatomical preparations and the interactive panel of Pirogov.	1. Demonstrates deep knowledge structures and general patterns of the structure and functioning of cells, tissues, hematopoietic organs and lymphatic systems, their regulatory mechanisms, correctly uses anatomical terminology when describing them. 2. Confidently shows organs, their parts and structural details on dummies, wet anatomical preparations and Pirogov's interactive panel.
LO2	demonstrates knowledge of the basic metabolic processes occurring in tissues, the mechanisms of their regulation at the cellular level and the possible consequences of their disruption. Knows the basic biochemical constants of biological	1. Does not understand the metabolic processes occurring in these tissues, the mechanisms of their regulation at the cellular	1. Has a superficial understanding of the metabolic processes occurring in these tissues, the mechanisms of their regulation at the cellular level	1. Shows a complete understanding of the metabolic processes occurring in these tissues, the mechanisms of	1. Competently, at a high level, explains the main metabolic processes occurring in these tissues, the mechanisms of

Department of "Normal Anatomy"

Department of "Normal and Pathological Physiology"

Department of "Pathological Anatomy and Histology"

Department of "Biology and Biochemistry"

Department "Introduction to the clinic"

Syllabus of discipline

42/11

45/11

46/11

75/11

Page from

	fluids of the human body in normal conditions	level and the possible consequences of their disruption. 2. Does not know the basic biochemical constants of biological fluids of the human body under normal conditions.	and the possible consequences of their disruption. 2.Knows the basic biochemical constants of biological fluids of the human body under normal conditions and pathology.	their regulation at the cellular level and the possible consequences of their disruption. 2.Applies knowledge of the basic biochemical constants of biological fluids of the human body to discuss the state of the body in normal conditions and pathologies.	their regulation at the cellular level and the possible consequences of their disruption. 2. Demonstrates excellent knowledge of the basic biochemical constants of body fluids to assess the patient's condition.
LO3	Shows readiness to collect patient complaints, medical history, examination results, laboratory, instrumental and other studies in order to recognize a condition or establish the presence or absence of a disease for monitoring and caring for patients	1. Does not have the skills to collect patient complaints and examination results. 2.Does not know the skills of laboratory and instrumental researchfor the purpose of recognizing the state or absence of disease	1. Makes gross mistakes when collecting the patient's complaints, his medical history and examination results. 2.Knows laboratory and instrumental tests in order to recognize a condition or establish the presence or absence of a disease	1.Shows interest incollection of patient complaints, medical history, examination results. 2. Gives interpretation to laboratory and instrumental studies in order to recognize a condition or establish the presence or absence of a disease for monitoring and caring for patients	1.Demonstrate s the skills of collecting patient complaints, his anamnesis, and examination results. 2.Analyzes datalaboratory, instrumental and other studies in order to recognize a condition or establish the presence or absence of a disease for monitoring and caring for patients
LO4	Demonstrates: own knowledge and skills	1. Does not have the skills	1.Admits inaccuracies when	1. When conducting	1.Demonstrate s: excellent

Department of "Normal Anatomy"

Department of "Normal and Pathological Physiology"

Department of "Pathological Anatomy and Histology"

Department of "Biology and Biochemistry"

Department "Introduction to the clinic"

Syllabus of discipline

42/11

45/11

46/11

75/11

Page from

		when conducting biochemical, morphophysiological studies; the ability to conduct a literature search and analysis of scientific articles in independent study of the discipline; ability to work in a team. Has an understanding of modern biochemical, morphofunctional approaches in the diagnosis of human diseases. Takes advantage of opportunities to stay informed about new discoveries and techniques	to independently conduct biochemical and morphophysiological studies. 2. Is not oriented in finding the necessary literary material and is not able to analyze scientific articles. 3. Does not demonstrate the ability to work in a team. 4. Has no idea about modern biochemical and morphofunctional approaches to the diagnosis of human diseases. 5. Does not take advantage of opportunities to be informed about new discoveries and methods.	conducting biochemical and morphophysiological studies and does not fully comply with them. 2. Conducts a search for the necessary literary material, analyzes scientific articles, but expresses thoughts without logic or arguments. 3. Able to work in a team, but does not show initiative. 4. Has an understanding of modern biochemical and morphofunctional approaches in the diagnosis of human diseases. 5. Takes advantage of opportunities to be informed about new discoveries and methods with the participation of the teacher.	biochemical and morphophysiological research, demonstrates good knowledge of theoretical material, demonstrates research skills and a desire for independent self-education. 2. Collects the necessary literary material to study a certain range of problems, analyzes scientific articles, while demonstrating critical thinking. 3. Able to work in a team, clearly express one's own thoughts and advise others, able to advise on a possible range of applications of biochemical and morphophysiological research. 4. Shows interest in studying	skills in independently conducting biochemical and morphophysiological research; analyzes research results, showing excellent knowledge of the necessary theoretical material; the ability to predict the state of the body based on the data received and the desire for independent self-education. 2. Searches for the necessary information in reference materials, scientific literature, and compares these data. Analyzes scientific articles while demonstrating critical thinking and the ability to clearly communicate one's own beliefs. 3. Works
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Department of "Normal Anatomy"

Department of "Normal and Pathological Physiology"

Department of "Pathological Anatomy and Histology"

Department of "Biology and Biochemistry"

Department "Introduction to the clinic"

Syllabus of discipline

42/11

45/11

46/11


75/11

Page from

					modern biochemical and morphofunctional approaches in the diagnosis of human diseases. 5. Widely uses opportunities to be informed about new discoveries and methods in the field of biochemistry and morphophysiology	actively in a team, articulates his own beliefs, effectively exchanges information, and is able to advise others on a possible range of applications of biochemical and morphophysiological research. 4. Creatively approaches the study of modern biochemical and morphofunctional approaches in the diagnosis of human diseases. 5. Takes the initiative to take full advantage of opportunities to be informed about new scientific discoveries and methods in the field of biochemistry and microbiology.
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10.2 Criteria for assessing teaching methods and technology

Checklist for practical training: Students are assessed according to individual assessment criteria depending on the form/method of assessment used during the lesson (oral questioning, solving test tasks, solving situational

<p>ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ</p>		 <p>SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»</p>
<p>Department of "Normal Anatomy" Department of "Normal and Pathological Physiology" Department of "Pathological Anatomy and Histology" Department of "Biology and Biochemistry" Department "Introduction to the clinic"</p>		<p>42/11 45/11 46/11 75/11</p>
Syllabus of discipline		Page from

problems), and their average score is displayed in the journal.

Checklist for SIW: Evaluation sheets for certain forms of completed assignments

Interim certification: OSPE. Testing

Multi-point knowledge assessment system:


Letter grade	Digital equivalent of points	Percentage	Traditional assessment
A	4.0	95-100	Great
A -	3.67	90-94	
B +	3.33	85-89	Fine
B	3.0	80-84	
B -	2.67	75-79	
C +	2.33	70-74	
C	2.0	65-69	Satisfactorily
C -	1.67	60-64	
D+	1.33	55-59	
D-	1.0	50-54	
FX	0.5	25-49	Not satisfactory
F	0	0-24	

Verbal response

Midterm exam	Grade	Criteria for evaluation
Verbal response	Great Corresponds to points: 95-100 90-94	The student did not make any mistakes during the answer, was oriented in the theories, concepts and directions of the discipline being studied, gave them a critical assessment, and also used the scientific achievements of other disciplines.
	Fine Corresponds to points: 85-89,80-84 75-79,70-74	The student did not make gross mistakes during the answer, but made inaccuracies and unprincipled errors, corrected by himself, and managed to systematize the program material with the help of the teacher.
	Satisfactorily Corresponds to points: 65-69,60-64 50-59	During the answer, the student made fundamental mistakes, limited himself only to the educational literature indicated by the teacher, and experienced great difficulties in systematizing the material.
	Unsatisfactory Corresponds to points 0-49	The student made gross mistakes while answering, did not study the basic literature on the topic of the lesson, and failed to use scientific terminology in histology and physiology.

Performing test tasks (testing)

Midterm exam	Grade	Criteria for evaluation
Performing test tasks (testing)	Great Compliant points:95-100,90-94	The student completed 90-100% of test tasks correctly.
	Fine Corresponds to points: 85-89,80-84	The student completed 75-89% of test tasks correctly.

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<p style="text-align: center;"> Department of "Normal Anatomy" Department of "Normal and Pathological Physiology" Department of "Pathological Anatomy and Histology" Department of "Biology and Biochemistry" Department "Introduction to the clinic" </p>		<p>42/11</p> <p>45/11</p> <p>46/11</p> <p>75/11</p>
<p style="text-align: center;">Syllabus of discipline</p>		<p>Page from</p>

	75-79,70-74	
	Satisfactorily Corresponds to points: 65-69,60-64,50-59	The student completed 50-74% of test tasks correctly.
	Unsatisfactory Corresponds to points 0-49	The student completed less than 50% of the test tasks correctly.

Solving situational (clinical) problems

Midterm exam	Grade	Criteria for evaluation
Solving situational problems	Great Compliant points: 95-100 90-94	He actively participated in solving situational problems, showed original thinking, showed deep knowledge of the material, and used scientific achievements of other disciplines in discussions.
	Fine Corresponds to points: 85-89,80-84 75-79,70-74	Actively participated in the work, demonstrated knowledge of the material, made unprincipled inaccuracies or errors, which were corrected by the student himself.
	Satisfactorily Corresponds to points: 65-69,60-64,50-59	When working in a group, he was passive, made inaccuracies and fundamental errors, and experienced great difficulty in systematizing the material.
	Unsatisfactory Corresponds to points 0-49	Did not take part in the work of the group, answering the teacher's questions, made fundamental errors and inaccuracies, and did not use scientific terminology when answering.


Evaluation paper

Criteria for evaluating the description of an anatomical specimen

FULL NAME. student _____

№	Step Evaluation Criteria	Level			
		Great 90-100	Fine 70-89	Satisfactor y 50-69	Bad 0-49
1.	Correctly finding the location of an organ on the torso, skeleton and on a living person	18-20	14-17.8	10-13.8	0-9.8
2.	The student must name the full name of the organ and describe its general structure	18-20	14-17.8	10-13.8	0-9.8
3	The student must name the structural elements of this organ.	18-20	14-17.8	10-13.8	0-9.8
4.	After listing the structural elements of the organ, the student must show it on posters, tablets and give a description.	18-20	14-17.8	10-13.8	0-9.8
5.	While describing the organ and its structural elements, the student must talk about the age-related characteristics of the organ	18-20	14-17.8	10-13.8	0-9.8

The maximum score is 100. Total points _____ Teacher signature _____

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<p style="text-align: center;"> Department of "Normal Anatomy" Department of "Normal and Pathological Physiology" Department of "Pathological Anatomy and Histology" Department of "Biology and Biochemistry" Department "Introduction to the clinic" </p>		<p style="text-align: right;"> 42/11 45/11 46/11 75/11 Page from </p>	
Syllabus of discipline			

Evaluation paper
Criteria for evaluating presentations in multimedia format
 FULL NAME. student _____

№	Criterion	Level, score			
		Great 90-100	Fine 70-89	satisfie d 50-69	unsatisf actory 0-49
1.	Availability of a title slide with a title, a presentation plan, a sufficient number of slides, a list of references and Internet sources.	9-10	7-8.9	5-6.9	0-4.9
2.	Compliance of the content of the presentation with the topic and assigned tasks.	9-10	7-8.9	5-6.9	0-4.9
3.	Arranging slides in a logical sequence.	9-10	7-8.9	5-6.9	0-4.9
4.	Style of presentation of the material (conciseness, clear formulation, structure).	9-10	7-8.9	5-6.9	0-4.9
5.	Use of modern sources of information in sufficient quantities.	9-10	7-8.9	5-6.9	0-4.9
6.	The ability to generalize material and draw clear conclusions.	9-10	7-8.9	5-6.9	0-4.9
7.	Level of orientation in the presentation material.	9-10	7-8.9	5-6.9	0-4.9
8.	Ability to report clearly, competently, and consistently.	9-10	7-8.9	5-6.9	0-4.9
9.	The ability to defend one's position and the ability to respond constructively to criticism.	9-10	7-8.9	5-6.9	0-4.9
10.	The quality of slide design (colorfulness, clarity, etc.).	9-10	7-8.9	5-6.9	0-4.9


The maximum score is 100. Total points _____ Signature of teacher _____

Checklist for assessing a practical lesson in histology

Criteria for evaluation	Level			
	Great	Fine	Satisfied	Unfortunate
Answers questions on an individual test using the Quizizz program	40	28	20	0
Answers oral survey questions (small groups)	20	14	10	0
Fills out tables	20	14	10	0
Performs situational tasks	20	14	10	0
Total:	100	70	50	0

Preparation and protection of histological microslides and microphotographs

Form control	Grade	Criteria for evaluation
Preparation of presentation of histological microslides and microphotographs and her defense.	Great Corresponds to points: 95-100 90-94	The student prepared a presentation of 3 microslides and 3 microphotographs on the topic within the appointed time, independently, carefully, containing at least 6 informative tables, using at least 5 literary sources and having a detailed plan, provided diagrams, tables and drawings corresponding to the topic during the defense demonstrated in-depth knowledge of the topic and accurately answered all questions asked.
	Fine	The student prepared a presentation of 3 microslides and 3

<p style="text-align: center;"> ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		<p style="text-align: center;">  SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
<p style="text-align: center;"> Department of "Normal Anatomy" Department of "Normal and Pathological Physiology" Department of "Pathological Anatomy and Histology" Department of "Biology and Biochemistry" Department "Introduction to the clinic" </p>		<p style="text-align: center;"> 42/11 45/11 46/11 75/11 </p>
<p style="text-align: center;">Syllabus of discipline</p>		<p style="text-align: center;">Page from</p>

	<p>Corresponds to points: 85-89 80-84 75-79 70-74</p>	<p>microphotographs on the topic within the appointed time, independently, carefully, containing at least 6 informative tables, using at least 5 literary sources and having a detailed plan, provided diagrams, tables and figures corresponding to the topic during the defense demonstrated good knowledge on the topic, but made minor mistakes when answering questions.</p>
	<p style="text-align: center;">Satisfactorily Corresponds to points: 65-69 60-64 50-54</p>	<p>The student prepared a presentation of 3 microslides and 3 microphotographs on the topic within the appointed time, independently, but sloppily, with at least 6 informative tables, using less than 5 literary sources and the presence of an undeveloped plan, provided an insufficient number of diagrams, tables and figures relevant to the topic, During the defense, he answered questions uncertainly and made fundamental mistakes.</p>
	<p style="text-align: center;">Unsatisfactory Corresponds to points 0-49</p>	<p>The student did not prepare a presentation of 3 microslides and 3 microphotographs on the topic within the appointed time, or prepared it within the appointed time, but not independently, sloppily, containing less than 6 meaningful tables, without indicating literary sources, in the absence of a plan, and made gross mistakes when answering questions or could not answer questions and did not defend the work.</p>

Checklist for assessing SIW on the basics of histology


№.	Criteria for evaluation	Level			
		Great	Fine	Satisfied	Unfortunate
1	Assessment of protection of histological microslides	40	28	20	0
2	Security assessment of electron micrographs	40	28	20	0
3	Assessing glossary production	20	14	10	0
	Total:	100	70	50	0

Compiling a glossary

Form control	Grade	Criteria for evaluation
Compiling a glossary	<p style="text-align: center;">Great corresponds to points: 95-100; 90-94</p>	<p>The student compiled a glossary on the topic on time, independently, accurately, without errors, containing at least 10 terms, correctly formulated concepts, and provided translations into Kazakh and English.</p>
	<p style="text-align: center;">Fine corresponds to points: 85-89; 80-84; 75-79; 70-74;</p>	<p>The student compiled a glossary on the topic on time, independently, accurately, containing at least 10 terms, correctly formulated concepts, made unprincipled errors when compiling the glossary, and provided translations into Kazakh and English.</p>
	<p style="text-align: center;">Satisfactorily corresponds to points: 65-69; 60-64; 50-54</p>	<p>The student compiled a glossary on the topic within the appointed time, independently, but sloppily, with less than 10 terms, while compiling the glossary he made fundamental errors, and provided a translation into Kazakh and English.</p>
	<p style="text-align: center;">Unsatisfactory corresponds to points 0-49</p>	<p>The student did not compile a glossary on the topic within the appointed time, or compiled it within the appointed time, but not independently, sloppily, containing less than 10 terms, on the topic, made gross errors when compiling the glossary, and did not provide a translation into Kazakh and English.</p>

Carrying out practical work, discussing research results

Form control	Grade	Criteria for evaluation
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<p style="text-align: center;"> Department of "Normal Anatomy" Department of "Normal and Pathological Physiology" Department of "Pathological Anatomy and Histology" Department of "Biology and Biochemistry" Department "Introduction to the clinic" </p>		<p>42/11</p> <p>45/11</p> <p>46/11</p> <p>75/11</p>
Syllabus of discipline		Page from


Doing practical work	Great Compliant points: 95-100 90-94	The student completed the practical work in a timely manner and without any errors and submitted a report on it, took an active part in the discussion of the research results, made reasonable conclusions, and showed original thinking.
	Fine Corresponds to points: 85-89;80-84 75-79;70-74	The student completed the practical work in a timely manner and submitted a report on it, making unprincipled errors, and took an active part in the discussion of the research results.
	Satisfactorily Corresponds to points: 65-69;60-64 50-54	The student completed the practical work in a timely manner and submitted a report on it, making fundamental mistakes, was not active during the discussion, and needed the help of the teacher.
	Unsatisfactory Corresponds to points 25-49, 0-24	The student submitted a report on practical work late, made serious mistakes, did not complete all the practical work provided for in the program, and did not take part in the discussion of the results

Assessment of practical skills

form of control	Grade	Criteria for evaluation
Practical skills	Great Compliant points: A (4.0; 95-100%) A- (3.67; 90-94%)	The student has excellent practical skills: he knows the methodology for performing practical skills quite accurately, and has sufficient patient care skills.
	Fine Compliant points: B+ (3.33; 85-89%) B (3.0; 80-84%) B- (2.67; 75-79%) C+ (2.33; 70-74%)	The student has good practical skills: he knows the methodology for performing practical skills insufficiently accurately, and has sufficient skills in caring for the patient.
	Satisfactorily Compliant points: C (2.0; 65-69%) C- (1.67; 60-64%) D+ (1.0; 50-54%)	The student has satisfactory practical skills: he knows the basic principles of the methodology for performing practical skills, but performs patient care skills with gross errors.
	Unsatisfactory Compliant points FX (0.5; 25-49%) F (0; 0-24%)	The student does not have a sufficient level of practical skills (does not know and cannot apply patient care skills).

Written response to the questions in this assignment

№	Criteria for evaluation	Points
1	The student showed original thinking, showed deep knowledge of the material, and used scientific achievements of other disciplines when answering. Used scientific terminology.	27-30
2	The student demonstrated knowledge of the material and made unprincipled inaccuracies, which were corrected by the student himself. Used scientific terminology.	21-26

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<p style="text-align: center;"> Department of "Normal Anatomy" Department of "Normal and Pathological Physiology" Department of "Pathological Anatomy and Histology" Department of "Biology and Biochemistry" Department "Introduction to the clinic" </p>		<p>42/11</p> <p>45/11</p> <p>46/11</p> <p>75/11</p>
<p style="text-align: center;">Syllabus of discipline</p>		<p>Page from</p>

3	During the answer, the student made inaccuracies and unprincipled errors, used scientific terminology, experienced great difficulties in systematizing the material, and needed help from the teacher.	15-20
4	The student did not answer the teacher's questions, made fundamental errors and inaccuracies, and did not use scientific terminology when answering.	0-14

Performing laboratory work

№	Criteria for evaluation	Points
1	Completed practical and laboratory work and submitted reports on it in a timely manner and without any errors, took an active part in discussing the results of the work, made well-founded conclusions, and showed original thinking.	27-30
2	Completed practical and laboratory work in a timely manner and submitted reports on them without fundamental comments, took an active part in discussing the results of the work	21-26
3	Completed practical and laboratory work in a timely manner and submitted reports on them. During work he was not active and needed help from a teacher	15-20
4	He submitted reports on practical work late and made fundamental errors in their implementation. Didn't complete all the practical work required by the program. Did not take part in the discussion of the results of the work.	0-14

Analysis of scientific articles:

№	Criteria for evaluation	Points
1	The work was completed carefully and submitted on time, written independently on at least 3 pages of printed text. Thoughts on the issue are presented clearly and well-reasoned. In the text of the work, references to the authors are indicated everywhere. When defending a work, the text is not read, but narrated. Confidently and accurately answers all questions asked. Articles used for this work are no more than 5 years old.	27-30
2	The work was completed carefully and submitted on time, written independently on at least 3 pages of printed text. Thoughts on the issue are presented clearly, but without arguments. In the text of the work, references to the authors are indicated everywhere. When defending a work, the text is not read, but narrated. When answering questions, he makes unprincipled mistakes. Articles used for this work are no more than 5 years old.	21-26
3	The work was completed carefully and submitted on time, written independently on at least 2 pages of printed text. Thoughts on the issue are presented scatteredly, without arguments. In the text of the work, references to authors are not indicated everywhere. When defending a work, the text is read. Answers questions uncertainly and makes fundamental mistakes. Articles used for this work are more than 5 years old.	15-20
4	The work is written in less than 2 printed texts. Thoughts are presented scatteredly, without arguments. There are no references to the authors in the text of the work. When defending a work, the text is read. When answering questions, he makes gross mistakes and does not understand the material. Articles used for this work are more than 5 years old.	0-14

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Syllabus of discipline		


Preparation of written creative work (essay)

№	Criteria for evaluation	Points
1	The content of the work is fully consistent with the topic; The topic is revealed in a deep and well-reasoned manner. Slender in composition, logical and consistent presentation of thoughts. The problem of the essay is clearly stated. There are no actual errors. The conclusion contains conclusions that logically follow from the content of the main part.	27-30
2	The topic is revealed quite fully and convincingly with minor deviations from it. A thesis statement corresponding to the topic of the essay is clearly formulated. The main part is logical and connected, but the thesis put forward is not fully proven; there are isolated factual inaccuracies.	21-26
3	A correct, but one-sided or insufficiently complete answer to the topic was given. There have been deviations from it or individual errors in the presentation of factual material. The material is presented quite logically, but there are some violations of the sequence of expression of thoughts. The conclusions do not fully correspond to the content of the main part	15-20
4	The topic is not fully covered, which indicates superficial knowledge. Characterized by a random arrangement of material, lack of connection between parts. Characterized by the presence of gross speech errors.	0-14


Preparing a smart map

form of control	Grade	Criteria for evaluation
Preparing a smart map	Great Compliant points: A (4.0; 95-100%) A- (3.67; 90-94%)	The mind map was made carefully, completed on time, completed independently using at least 5 literary sources. Diagrams, tables and figures corresponding to the topic are provided. When defending, he does not read the material, but tells it. Confidently and accurately answers all questions asked.
	Fine Compliant points: B+ (3.33; 85-89%) B (3.0; 80-84%) B- (2.67; 75-79%) C+ (2.33; 70-74%)	The intelligence map was completed carefully and completed on time, completed independently using at least 4 literary sources. Diagrams, tables and figures corresponding to the topic are provided. When defending, he does not read the material, but tells it. When answering questions, he makes unprincipled mistakes.
	Satisfactorily Compliant points: C (2.0; 65-69%) C- (1.67; 60-64%) D+ (1.0; 50-54%)	The intelligence map was completed carefully and completed on time, completed independently using at least 3 literary sources. Diagrams, tables and figures corresponding to the topic are provided. When defending, he does not read the material, but tells it. Confidently and accurately answers all questions asked. When defending, the text is read. Answers questions uncertainly and makes fundamental mistakes.
	Unsatisfactory Compliant points FX (0.5; 25-49%) F (0; 0-24%)	The intelligence map was not made carefully and was not submitted on time; it was not written independently using less than 3 literary sources. When defending, the text is read. When answering questions, he makes gross mistakes and does not understand the material.


11.	Learning Resources	
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Department of "Pathological Anatomy and Histology"	
Department of "Biology and Biochemistry"	46/11
Department "Introduction to the clinic"	75/11
Syllabus of discipline	Page from


Electronic resources	<ol style="list-style-type: none"> 1. SKMA repository http://lib.ukma.kz/repository/ 2. Republican Interuniversity Electronic Library http://rmebrk.kz/ 3. Student Advisor http://www.studmedlib.ru/ 4. Ashyk kitapkhanah https://kitap.kz/ 5. http://t.me/AkzharkynGaukhar 6. Smart Doctor YouTube https://goo.gl/zSzoZD 7. https://meduniver.com/Medical/Video/predmet_metodi_istoria_gistologii.html 8. https://meduniver.com/Medical/Video/citologia.html 9. https://meduniver.com/Medical/Video/lekcia_po_citologii.html 10. https://meduniver.com/Medical/Video/lekcia_po_embryologii.html 11. https://meduniver.com/Medical/Video/razvitie_ploda_i_stroenie_placenta.html 12. https://meduniver.com/Medical/Video/gistologia_epitelialnix_tkanei.html 13. https://meduniver.com/Medical/Video/gistologia_rixloi_voloknistoi_tkani.html 14. https://meduniver.com/Medical/Video/gistologia_sobstvenno_soedinitelnix_tkanei.html 15. https://meduniver.com/Medical/Video/osteogenez_i_xondroogenez.html 16. https://meduniver.com/Medical/Video/gistologia_epitelialnix_i_gelezistix_tkanei.html 17. SKMA website: 18. https://ukma.kz 19. Normal physiology [Electronic resource]: textbook / ed. B. I. Tkachenko. - 3rd ed., rev. and additional - Electronic text data. (53.1MB). - M.: GEOTAR - Media, 2017. - email. optical disk 20. Adam physiology. Dynamics syzbalar atlases [Electronic resource]: okulyk / K. V. Sudakov [reinforced concrete]; Kazak tel. room M.K. Kankozha. - Electronic text data. (105MB). - M.: GEOTAR - Media, 2017. - 464b. With. 21. Kalypty physiology [Electronic resource]: okulyk / kaz.til. room F. A. Mindubaeva; ed. K.V. Sudakov. - Electronic text data. (1.42Mb). - M.: GEOTAR - Media, 2015. - 864 bet.el. wholesale disk 22. Kamkin, A. G. Atlas of physiology. In 2 volumes. T. 1 [Electronic resource]: textbook / A. G. Kamkin, I. S. Kiseleva. - Electronic text data. (58.4 MB). - M.: GEOTAR - Media, 2010. - 408 p. email optical disk 23. Kamkin, A. G. Atlas of physiology. In 2 volumes. T. 2 [Electronic resource]: textbook / A. G. Kamkin, I. S. Kiseleva. - Electronic text data. (58.7 MB). - M.: GEOTAR - Media, 2012. - 448 p. 24. Physiology of penin electrons oku kuraly [Electronic resource]: medicine college arnalgan oku kuraly / Kur densaulyk saktau ministerligi; Technique for septic tank; Medicine mamandyktarga arnalgan. - Electron. text data (22.3 MB). - Turkistan: OKO, 2012. - el. wholesale Disk 25. Digital catalogue. For internal use http://10.10.202.52 26. For external use http://89.218.155.74 27. Republican Interuniversity Electronic Library http://rmebrk.kz/ 28. Paragraph https://online.zakon.kz/Medicine 29. Law (access in the reference and information sector) https://zan.kz 30. Scientific electronic library https://elibrary.ru/ 31. "BooksMed" electrons kitapkhanasy http://www.booksmed.com 32. "Web of science" (Thomson Reuters) http://apps.webofknowledge.com
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Department of "Biology and Biochemistry"	46/11
Department "Introduction to the clinic"	75/11
Syllabus of discipline	Page from


	<p>33. Science Direct (Elsevier)https://www.sciencedirect.com</p> <p>34. Scopus (Elsevier)www.scopus.com</p> <p>35. PubMed https://www.ncbi.nlm.nih.gov/pubmed</p> <p>36. Dathaev, U. M. Communication skills [Electronic resource]: textbook / U. M. Dathaev, M. A. Asimov, G. Z. Umurzakhova. - Electron. text data (5.21 MB). - Almaty: Evero, 2016. - 256 p. email wholesale disk (CD-ROM)</p> <p>37. Asimov, A. A. Kommunikativtik dagdylyr [Electronic resource]: okulyk / M. A. Asimov, A. A. Sultanbekov. - Electron. text data (7.30MB). - Almaty: Evero, 2016. - 260 bet. email wholesale disk (CD-ROM).</p> <p>38. Adilova, L. M. Meyirgerdin manipulations orreketinin algorithmderi [Electronic resource]: oku kuraly = Algorithms for nursing manipulations: textbook. manual - M.: "Litterra", 2016. - 248b.</p> <p>39. Communicator dagdylyr. Communication skills. Almaty, Evero LLP, 118https://www.elib.kz/ru/search/read_book/601/</p> <p>40. Dariger mamandygyna kirispe. Clinic, kutyk, ethics and communication negyzderi. Asimov M.A., Orzabkova G.O., Madaliev S.Kh., Bagiyarova F.A., 2017/https://aknurpress.kz/login</p> <p>41. Zhedel medicinalyk zhardem Kanybekov A., 2017 /https://aknurpress.kz/login</p> <p>42. Diagnostics zhane zhedel medicinalyk komek korsetu algoritmi / algorithm of diagnosis and emergency care Alpysova A.R. , 2015/https://aknurpress.kz/login</p>
Electronic textbooks	<p>1. Bilic, G. L. Anatomistla human. Atlas. In 3 volumes. T.1. Musculoskeletal system. Osteology. Syndesmology. Myology [Electronic resource]: textbook - M.: GEOTAR - Media, 2013.</p> <p>2. Bilic, G. L. Anatomistla human. Atlas. In 3 volumes. T. 2 [Electronic resource]: M.: GEOTAR - Media, 2013.</p> <p>3. Bilic, G. L. Anatomistla human. Atlas. V. 3 t. T. 3 [Electronic resource]: textbook M.: GEOTAR - Media, 2013.</p> <p>4. Human anatomy. In 2 volumes. T. 1 [Electronic resource]: textbook M.: GEOTAR - Media, 2013.</p> <p>5. Human anatomy. In 2 volumes. T. 2 [Electronic resource]: textbook - M.: GEOTAR - Media, 2013.</p> <p>6. Histology, embryology, cytology [Electronic resource]: textbook / ed. Yu. I. Afanasyeva. - Electron. text data (41.1MB). - M.: GEOTAR - Media, 2016. - 800 p.</p> <p>7. Histology. Comprehensive tests: answers and explanations [Electronic resource]: textbook / ed. S. L. Kuznetsova. - Electron. text data (41.1MB). - M.: GEOTAR - Media, 2014. - 288 p.</p> <p>8. Histology [Electronic resource]: textbook / S. Yu. Vinogradov. - Electron. text data (39.6MB). - M.: GEOTAR - Media, 2014. - 184 p.</p> <p>9. Histology. 1 -bolim [Electronic resource] :okulyk. - Electron. text data (13.1 MB). - [B. m.: b. And.]. - email wholesale disk (CD-ROM).</p> <p>10. Histology. Atlas for practical classes [Electronic resource]: textbook / N.V. Boychuk [etc.]. - Electron. text data (131 MB). - M.: Publishing group "GEOTAR-Media", 2010. - 160 p. email wholesale disk (CD-ROM).</p> <p>11. Biochemistry [Electronic resource]: textbook for universities / ed. E. S. Severina. - 5th ed. , rev. and additional - Electron. text data (66.3 MB). - M.: GEOTAR - Media, 2013. - 768 p. email wholesale disk (CD-ROM).</p>

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<p style="text-align: center;">Department of "Normal and Pathological Physiology"</p>		45/11
<p style="text-align: center;">Department of "Pathological Anatomy and Histology"</p>		
<p style="text-align: center;">Department of "Biology and Biochemistry"</p>		46/11
<p style="text-align: center;">Department "Introduction to the clinic"</p>		75/11
<p style="text-align: center;">Syllabus of discipline</p>		Page from

	<p>12. Biochemistry [Electronic resource]: textbook / edited by E. S. Severin. - 5th ed. - Electron. text data (66.4 MB). - M.: Publishing group "GEOTAR-Media", 2011. - 768 p. email wholesale disk (CD-ROM)</p> <p>13. Tapbergenov S.O. Medical and clinical biochemistry / Tapbergenov S.O. 2020.-512 p. https://www.elib.kz/ru/search/read_book/429/</p> <p>Aryngazin, K.Sh., Mazhimova, M.B. First aid in case of accidents: Educational and methodological manual. / Comp. K. Sh. Aryngazin. - Pavlodar: Kereku, 2013. - 73 p. http://rmebrk.kz/</p> <p>1. S. Kabiyeva Introduction in clinic: Textbook, volume I. – Almaty: 2020 – 263 p. https://elib.kz/ru/search/read_book/324/</p> <p>Kabieva S.M. Introduction to the clinic: Textbook. Volume I./S.M. Kabieva.- Almaty: Evero, 2020. –304 p. https://www.elib.kz/ru/search/read_book/316/</p>
Laboratory Physical Resources	<p>Skeleton, set of bones, dummies, torso, electronic tablets, interactive anatomical table "Pirogov", anatomical panel "Pirogov"</p> <p>Microscopes, a set of micropreparations, an atlas of microphotographs.</p> <p>Models, Sivtsev table, Forster perimeter, electrocardiograph, tonometer, phonendoscope, Sali hemometer.</p> <p>Biochemical analyzer, spectrophotometers, set of reagents, test tubes</p> <p>Introduction to the clinic</p> <p>Simulators of the Center for Practical Skills</p>
Literature	<p><i>Main:</i></p> <ol style="list-style-type: none"> Gaivoronsky, I. V. Human anatomy. In 2 volumes. T. 1. System of organs of support and movement. Splanchnology: textbook - M.: GEOTAR - Media, 2014 Borzyak, E. I. Anatomii'm human. Photographic atlas. In 3 volumes. Volume 1. Musculoskeletal system training manual - M.: GEOTAR - Media, 2014. - 480 p. Sinelnikov, R. D. Atlas of human anatomy. In 4 volumes. T. 1. The doctrine of bones, joints of bones and muscles: textbook. allowance . - 7th ed., revised. - M.: New Wave: Publisher Umerenkov, 2012. <p><i>Additional:</i></p> <ol style="list-style-type: none"> Anatomy according to Pirogov. Atlas of human anatomy. In 3 vols. T. 2. Head. Neck: M.: GEOTAR - Media, 2013 Boyanovich Yu. V. Human anatomy: atlas. - Rostov n/a: Phoenix, 2011 Sapin, M. R. Normal human anatomy: In 2 books. Book 1: textbook / M. R. Sapin, G. L. Bilich; - M.: MIA, 2010. Sapin, M. R. Normal human anatomy: In 2 books. Book 2: textbook / M. R. Sapin, G. L. Bilich. - ; M.: MIA, 2010. Gain M.G. Human anatomy: textbook. -12th ed., revised. And additional – St. Petersburg: Publishing house. house. SPbMAPO, 2009 <p>main:</p> <ol style="list-style-type: none"> Afanasyev Yu.I. and Yurina N.A. Histology, cytology and embryology - 6th ed. – M.: Medicine, 2016. 800 pp. Yushkantseva S.I., Bykov V.L. Histology, cytology and embryology: Atlas. - M.: GEOTAR-Media, 2017. 296 p. <p>additional:</p> <p>1Krstic R.V. Illustrated encyclopedia of human histology: 1576 illustrations. Per. from English –</p>


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<p style="text-align: center;">Syllabus of discipline</p>		

	<p> M.: Onyx Publishing House LLC: Mir and Education Publishing House, 2010. 608 p. 2. Selezneva, T.D. [Histology]: textbook. allowance / T.D. Selezneva A.S. Mishin V. Yu. Barsukov. - M.: Eksmo, 2010. - 350 p. 3. Junqueira L.K., Carneiro J.. Histology: a textbook. Per. from English Ed. V.L. Bykova. – M.: GEOTAR-Media, 2009. 576 p. Kuznetsov S.L., Mushkambarov N.N. Histology, cytology and embryology. Textbook. Publishing house: MIA, 2017. 600 pp. main: 1. Normal physiology [Text]: textbook / Ed. L. Z. Telya, N. A. Agadzhanyan; M-in image. and science of the Russian Federation. Rec. State Budgetary Educational Institution of Higher Professional Education "First Moscow State Medical University named after I.M. Sechenov." - M.: "Litterra", 2015. - 768 p. : silt 2. Human physiology [Text]: textbook / ed. E.B. Babsky. - Almaty: Evero, 2014. - 743 p. 3. Human physiology: textbook / L. Z. Tel [et al.]. - Almaty: Evero, 2012 4. Kositsky G.I. Physiology 1-2-3 volume - Evero, 2014. 5. Nurmukhambetuly, A. Oryssha-Kazakh medicine (physiology) sozdik = Russian-Kazakh medical - Almaty: Evero, 2014. 6. Human physiology: textbook / L. Z. Tel [et al.]. - Rec. Rep. Center for Innovative Technologies of Medical Education and Science of the Ministry of Health of the Republic of Kazakhstan. - Almaty: Evero, 2012. - 600 p. additional: 1. Mindubaeva, F. A. Guide to practical classes in physiology [Text]: teaching aid /. - Almaty: Evero, 2016. - 208 p. 2. Situational tasks in the course of normal physiology: educational manual / V.K. Kasymbekov [etc.]. - Almaty: Evero, 2016. - 144 p. 3. Nurmuhambetuly, A. Oryssha-Kazakhsha medicine (physiology) сөздік = Russian-Kazakh medical - Almaty: Evero, 2014. - 903 p. 4. Mindubaeva, F. A. Guide to practical classes in physiology: educational and methodological manual. - Almaty: Evero, 2012. - 194 p. 5. Human physiology: textbook / ed. V. M. Pokrovsky, G. F. Korotko. - 2nd ed., revised. and additional; Rec. Department of educational medical institutions and personnel policy of the Ministry of Health of the Russian Federation. - M.: Medicine, 2007. - 656 s. 6. Mindubaeva, F. A. Guide to practical classes in physiology: educational and methodological manual / F. A. Mindubaeva, A. M. Evnevich, T. I. Krekesheva. - Almaty: Evero, 2012. - 194 p. 1. Biochemistry, ed. Corresponding member RAS, prof. E.S. Severina.- M., 2011 2. Tapbergenov S.O. "Medical and clinical biochemistry." - Evero, 2017. Volume; 3. Tapbergenov S.O. "Medical and clinical biochemistry." - Evero, 2017. II volume; 4. Tapbergenov S.O. Medical biochemistry. - Astana, 2011. Additional: 1. Campbell M.K., Biochemistry, 1-part, Almaty-2013; 2. Biochemistry: textbook / ed. E. S. Severina. - 5th ed., rev. and additional – M.: GEOTAR - Media, 2011. 3. Guide to practical classes in biological chemistry: educational and methodological manual. f. medical students Universities / ed. S. O. Tapbergenova. - Almaty: Evero, 2012. - 150 p. 4. Biological chemistry with exercises and problems: textbook / ed. S. E. Severina. - M.: GEOTAR - Media, 2011. - 624 p. + el. wholesale disk (CD-ROM) Main: 1. Kirispe Clinic. Volume1 [Matin]: okulyk / S. M. Kabieva [reinforced concrete]; To the lady of the Minister of the League. KMMU. - Almaty: Evero, 2016. - 287 b. With </p>
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<p style="text-align: center;">Syllabus of discipline</p>		<p style="text-align: center;">Page from</p>

	<p>2. Karkabaeva, A. D. Clinic of Kirispe-2. 1 -bolim [Mətin]:оққұрулалы / A. D. Karkabaeva, N. N. Telyaeva. - Astana: [b. i.], 2017. - 152 bet. With.</p> <p>3. Karkabaeva, A. D. Clinic of Kirispe-2. II-bolim [Mətin]:оққұрулалы / A. D. Karkabaeva, N. N. Telyaeva. - [B. m.]: Astana, 2017. - 208 bet. WITH</p> <p>4. Telyaeva, N. N. Introduction to the clinic -2. Part 1 [Text]: textbook. manual / N. N. Telyaeva, A. D. Karkabaeva. - Astana: [b. i.], 2017. - 214 p.</p> <p>5. Telyaeva, N. N. Introduction to the clinic -2. Part II [Text]: textbook. manual / N. N. Telyaeva, A. D. Karkabaeva. - Astana: [b. i.], 2017. - 210 p.</p> <p>Additional:</p> <p>1. Tolekova, S. Z.Clinic of kirispe [Matin]: оқу құрула / S. Z. Tolekova. - Karaganda: Residential complex "Aknur", 2013. - 244 bet. WITH</p> <p>2. Alpysova A. R.Aurukhanaga deyingi kezende zhedel komek korsetu algorithmderi = Algorithms for providing emergency care at the prehospital stage: oku kuraly / A. R. Alpysova, N. V. Molodovskaya; ҚР Densaulyk saktau zəne aleumettik lady of the minister of league. - Karaganda: АҚҒҰП, 2019. - 120 b. With.</p> <p>3. Kanybekov A.Zhedel medicinallyk zharden: oku kuraly / A. Kanybekov. - 2nd bass. - Karaganda: АҚҒҰП, 2017. - 266 bet. With.</p> <p>4. Kabieva, S. M.Introduction to the clinic. T. 1. [Text]: textbook / S. M. Kabieva. - Almaty: Evero, 2016. - 304 p.</p> <p>5. Ayapov K.Modernization of nursing education in Kazakhstan: collection of articles. / K. Ayapov. - 2nd ed., revised. - [b. m.]: New book, 2022. - 220 p.</p> <p>6. Kabiyeveva, S.Introduction in clinic. Volume 1 [Text]: textbook / S. Kabiyeveva. - Almaty: "Evero", 2016. - 263 p.</p> <p>Hammer, Gary D.Pathophysiology of Disease: An Introduction to Clinical Medicine / Gary D. Hammer. - 7nd ed. - New York: Mg Graw Hill. Education, 2014. - 762 p.</p>
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12.	Module Policy
	<p>Requirements for students:</p> <ul style="list-style-type: none"> • not be late for classes; • do not miss classes without good reason; • have anatomical gloves, tweezers and a scalpel; • be active during practical classes; • be able to work in a team; • carry out and submit the SIW in a timely manner, on schedule; • do not engage in extraneous activities during classes; • be tolerant, open and friendly towards fellow students and teachers; • observe ethical standards of conduct when working with anatomical specimens and organs of the human body; • treats the property of the department with care; • make up missed classes in a timely manner for valid reasons; • Follow safety precautions in the classroom. <p>13. During lectures/practical classes/SIWP, students are prohibited from:</p> <ol style="list-style-type: none"> 1. use mobile devices/gadgets; 2. leave the training room/auditorium (leave the workplace at the clinical/industrial base) without the permission of the teacher. <p>Dress code requirements</p> <p>The student is obliged:</p> <ol style="list-style-type: none"> 1.have a clean, ironed medical gown, cap/cap;

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<p style="text-align: center;">Department of "Normal Anatomy"</p>		42/11	
<p style="text-align: center;">Department of "Normal and Pathological Physiology"</p>		45/11	
<p style="text-align: center;">Department of "Pathological Anatomy and Histology"</p>			
<p style="text-align: center;">Department of "Biology and Biochemistry"</p>		46/11	
<p style="text-align: center;">Department "Introduction to the clinic"</p>		75/11	
<p style="text-align: center;">Syllabus of discipline</p>		Page from	

2. have a neat hairstyle and short-cut nails; (for girls: bright makeup and bright nail polish are not allowed).

Penalties:

1. In case of a single violation of the module policy, the student receives a verbal warning from the teacher.
2. In case of repeated violations of the module policy, the student provides an explanatory note addressed to the head of the department.
3. In case of systematic violation of the discipline policy, the head of the department submits a corresponding report to the dean's office.
 - A student who does not appear for a midterm control without a good reason and receives an unsatisfactory grade for one of the types of controls (ME1, ME2, TKsr) is not allowed to take the exam in the discipline; A student who does not appear at the ME for a good reason, immediately after starting classes, with the permission of the dean's office, receives a work sheet.
 - For 1 missed lecture for an unexcused reason, the staff point is 1.0 points and is deducted from the midterm control grades.
 - For 1 missed SIW without a valid reason, the penalty point is 2.0 points and is deducted from the SIW grades
 - Honorable mention points are taken into account according to department policy. Incentive points are added to the midterm assessment. For active participation in the work of the Council of People's Commissars and seminars in each discipline, the student is awarded an incentive score from 5 to 10.

If students do not score 50% of the current rating (i.e. 30 points), then they are not allowed to take the final control (exam). Requirements for students, attendance, behavior, grading policies, penalties, incentives, etc.

The student must:


- observe medical ethics and deontology;
- do not smoke in the academy;
- maintain cleanliness in the department;
- do not damage furniture in classrooms;
- treat textbooks with care;
- maintain the appearance of a medical student;
- comply with safety regulations;
- wear masks during a flu epidemic;
- 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 the permission of the dean's office and at the time specified by the teacher;
- not be late for classes;
- have the necessary documentation in classes: syllabus, methodological recommendations for classes, lectures, notebooks and textbooks;
- prepare conscientiously for classes;
- be active during classes;
- do not engage in extraneous activities during classes: do not talk, do not smoke, do not chew chewing 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 discipline;
- maintain silence and order during breaks;
- Complete and submit SIW on time according to schedule (electronically); with checking written works for plagiarism.

Penalties for failure to complete sections of work:

- if you miss lectures without a good reason, the midterm control score is reduced - 1 point for each missed lecture;
- if you miss the SIWP without a good reason, the grade for the SIWP is reduced - 2 points for each missed lesson;
- if the SIW is submitted late without a good reason (later than the specified week), the SIW will not be accepted;
- 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 dean's office of the faculty;

Criteria for non-admission to final control

- a student who received an unsatisfactory grade for one of the types of tests (midterm control 1, midterm control 2,




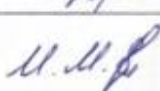

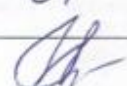
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<p style="text-align: center;">Department "Introduction to the clinic"</p>		75/11
<p style="text-align: center;">Syllabus of discipline</p>		Page from

average rating of the current control) is not allowed to take the final control in the discipline.

13.	<p>Academic policy based on the moral and ethical values of the academy</p> <p>www.ukma.kz SKMA Regulations and Rules. Academic Policy.</p> <p>P.4 Student Code of Honor</p> <p>P.10. Organization of the educational process</p> <p>P.12. Grading Policy</p> <p>Final control– students who have fully mastered the discipline program and have achieved an admission rating are allowed to take the exam.</p> <p>The final grade is calculated automatically based on the average grade of the current control, the average grade of the milestone controls and the grade of the final control:</p> <p>Tolerance rating (60%) = average score of milestone controls (20%) + average score of current control (40%)</p> <p>Average score of midterm exam = ME1 + ME2 / 2</p> <p>Average current control score = arithmetic mean sum of current marks, taking into account the average score for the SIW and penalty points.</p> <p>Final score (100%) = MEsr x 0.2 + TKsr x 0.4 + IR x 0.4</p> <p>Final grade (100%) = Admission rating (60%) + Final control (40%)</p> <p><u>An example of calculating a student's final grade:</u></p> <p>Penalty points:</p> <p>For example, a student missed 2 lectures = 1.0 x 2 = 2.0 points</p> <p>For missing 1 SIWP = 2.0 points</p> <p>ME 1 – 80 points</p> <p>ME 2 – 90 points</p> <p>MEsr = (80-2)+90 = 84 points</p> <p>2</p> <p>Average arithmetic assessment of current control (practical and laboratory classes) – 80 points</p> <p>SIW 1 – 75 points</p> <p>SIW 2 – 85 points</p> <p>SIWN... – number of SIW</p> <p>Average score for SIW = 75 + 85 + N... = 80 points</p> <p>2+N...</p> <p>Average current grade taking into account SIW and penalty points:</p> <p>TKSr* = TKsr + SIWsr - Ksro = 80 + (80 – 2.0) = 158 = 79.0</p> <p>2 2 2</p> <p>Admission rating (60%)=MEsr x 0.2 + TKsr x 0.4 = 84 x 0.2+ 79.0×0.4 =16.8+31.6=48.4 points</p> <p>Final control (40%), for example, the student answered 45 questions correctly out of 50 (90%),</p> <p>90 x 0.4 = 36 points</p> <p>Final score (100%) =</p> <p>1) TR (60%) + FK (40%) = 48.4 + 36 = 84.4 points</p> <p>2) MEsr x 0.2 + TKsr x 0.4 + IR x 0.4 = 84.0 x 0.2 + 79.0 x 0.4 + 90 x0.4 = 16.8 + 31.6 + 36 =84.4 points</p> <p>MEsr – average assessment of milestone controls</p> <p>TKsr – average assessment of current control</p> <p>FK - assessment of final control</p> <p>ME 1 – midterm exam 1</p> <p>ME 2 – midterm exam 2</p> <p>TR - tolerance rating</p> <p>TKSr* - average current score taking into account SIW and penalty points</p> <p>Alek – missed rate of the 1st lecture</p> <p>Asiw – coefficient of admission of the 1st SIWP</p>
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Department of "Normal Anatomy"	42/11
Department of "Normal and Pathological Physiology"	45/11
Department of "Pathological Anatomy and Histology"	
Department of "Biology and Biochemistry"	46/11
Department "Introduction to the clinic"	75/11
Syllabus of discipline	Page from

14. Approval and revision

Date of approval by departments	Protocol № 10 25.05.2023	Department of Normal Anatomy, Ph.D., Acting Prof. Tanabaev B.D.	
	Protocol № 10 29.05.2023	Department of Normal and Pathological Physiology Ph.D. Zhakipbekova G.S.	
	Protocol № 11 26.05.2023	Department of Pathological Anatomy and Histology Doctor of Medical Sciences, Sadykova A.Sh.	
	Protocol № 12 26.05.2023	Department of Biology and Biochemistry, Professor Esirkepov M.M.	
	Protocol № 11 26.05.2023	Department of "Introduction to the Clinic" Candidate of Medical Sciences, Acting Associate Professor Zhumadilov A.R.	
Date of approval for the CPC	Protocol № 11 05.06.2023	Chairman of the KOP Sadykova A.Sh.	

Department of "Normal Anatomy"	42/11
Department of "Normal and Pathological Physiology"	45/11
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Department of "Biology and Biochemistry"	46/11
Department "Introduction to the clinic"	75/11
Syllabus of discipline	Page from

-044/270/01-2023

Protocol of approval Working curriculum of the discipline (Syllabus)
with other disciplines for 2023-2024

Disciplines of coordination	Proposals for changes in the proportions of the material, the order of presentation, etc.	Numbers of minutes and dates of meetings of the corresponding departments
Prerequisites:		
1. Introduction to the profession	Moral aspects of the professional activity of a doctor. Health care organizations. Therapeutic-protective regime. Safe care. Communication culture, abilities, competence. Basic principles of effective communication with the patient, his family members, and colleagues. Objectives, principles of medical law. The right to health care and medical care. Fundamentals and conditions of legal practice in the field of healthcare.	Protocol № <u>10</u> from <u>26.05</u> 2023
2. Structural organization of human physiological processes	Formation of fundamental knowledge aimed at understanding the structure of cells, their polymorphism, the relationship and function of the structure, and the metabolic process. Biological membranes. Principles of organization of living matter at the tissue level. Cellular and molecular mechanisms of heredity, patterns of human embryonic development, his difficult times, new molecular genetic and preventive methods for identifying developmental defects. Pharmacological and other reactions of the body to treatment and the significance of hereditary factors in the etiology of the disease.	Protocol № <u>10</u> from <u>29.05</u> 2023
Post-requisites:		
1. General pathology	Formation of fundamental knowledge about the patterns of development of typical general pathological processes for the diagnosis of the most common diseases; skills in pathophysiological analysis of clinical and laboratory data, description of macro-micropreparations, understanding of the pathophysiological basis for the prevention and treatment of various diseases. Etiopathogenesis, morphogenesis, morphology, outcome.	Protocol № <u>11</u> from <u>26.05</u> 2023
2. Blood and lymph in pathology	formation of fundamental knowledge on the basics of semiotics, syndromology, physical examination methods and basic parameters of laboratory research, issues of etiology, pathogenesis, morphogenesis, biological characteristics of microorganisms of common pathological processes of blood and lymph, acquisition of skills in choosing research methods for diagnosis and drugs for treating the most common diseases in adults and children.	Protocol № <u>12</u> dated <u>26.05</u> 2023

ОҢТҮСТІК ҚАЗАҚСТАН

**MEDISINA
AKADEMIASY**

«Оңтүстік Қазақстан медицина академиясы» АҚ



SOUTH KAZAKHSTAN

**MEDICAL
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АО «Южно-Казахстанская медицинская академия»

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Department "Introduction to the clinic"	75/11
Syllabus of discipline	Page from