

## Syllabus

### Department of Pathology and Forensic Medicine

#### Working study program of the discipline “General Pathology” Educational program 6B10115 “Medicine”

<b>1. General information about the discipline</b>			
1.1	Discipline code: EP 3214	1.6	Academic year: 2024-2025
1.2	Name of discipline: General pathology	1.7	Course: 3
1.3	Prerequisites: Musculoskeletal system and skin in the norm, nervous system and organs of senses and vision in the norm, cardiorespiratory system in the norm, digestive and endocrine systems in the norm, genitourinary system in the norm, blood and lymph in the norm	1.8	Semester: 5
1.4	Post-requisites: Musculoskeletal system and skin in pathology, nervous system and organs of senses and vision in pathology, cardiorespiratory system in pathology, digestive and endocrine systems in pathology, genitourinary system in pathology, blood and lymph in pathology	1.9	Number of credits (ECTS): 6/180
1.5	Cycle: BD	1.10	Component: IC
<b>2. Description of the discipline</b>			
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- and micropreparations, understanding of the pathophysiological basis for the prevention and treatment of various diseases. Etiopathogenesis, morphogenesis, morphology, outcome.			
<b>3. Summative Assessment Form</b>			
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/OSCE or practical skills checking	3.8	Other (specify)
<b>4. Objectives of the discipline</b>			
1. Formation of a holistic understanding of the mechanisms of development of general pathological processes, based on the study of issues of general nosology, the concept of pre-disease, disease, their stages, general etiology, pathogenesis and morphogenesis of pathological processes. 2. Formation of clinical thinking skills based on the application of knowledge of pathophysiological mechanisms, pathoanatomical changes, complications and outcomes of general pathological processes developing in various diseases.			
<b>5. Final learning outcomes (LO of the discipline)</b>			
LO 1	Demonstrates knowledge of general pathology, understanding of the patterns of development of changes in cells and tissues in various pathological conditions.		
LO 2	Explains the etiology, pathogenesis, morphogenesis of general pathological processes.		
LO 3	Determines pathological changes and functional disorders at the organ, tissue and cellular levels, describes macro- and micropreparations and analyzes the results of clinical, laboratory and experimental studies.		
LO 4	Makes conclusions on macro- and micropreparations, as well as on the results of clinical, laboratory and experimental studies and predicts outcomes of pathological changes in organs and tissues during general pathological processes when solving cases.		
5.1	<b>LO of the discipline</b>	<b>EP learning outcomes with which LO of the discipline are associated</b>	
	LO 1	LO 1 Applies fundamental knowledge of biomedical, clinical, epidemiological and social behavioral sciences.	

LO 2 LO 3 LO 4	LO 2 Provides patient-centered care in the fields of biomedical, clinical, epidemiological and social-behavioral sciences aimed at the diagnosis, treatment and prevention of the most common diseases. LO 11. Analyzes the results of research and professional activities based on scientific data.
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**6. Detailed information about the discipline**

6.1	Venue: SKMA, Department of Pathology and Forensic Medicine: Shymkent, sq. Al-Farabi, 3, educational building No. 2, 4th floor; audiences – No. 404 a, b; No. 406; No. 408; No. 409, No. 411a, b. e-mail: <a href="mailto:Patan.gisto@mail.ru">Patan.gisto@mail.ru</a>
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6.2	Number of hours	Lectures	Practical class	Lab.	SIWT	SIW
		12	48		18	102

**6.3 Discipline study plan**

Days		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Hours
Class form																	
General patolo - gical physiology (3 cr.)	Lec	1		1				1			1		1		1		<b>6</b>
	Pract	3		3		4		3	2		3		3		3		<b>24</b>
	SIWT	1		1		1		2	1		1		1		1		<b>9</b>
	SIW	6		6		7			6	6		6		5			<b>42+9(PA)= 51</b>
General patolo - gical anatomy (3 cr.)	Lec		1				1			1		1		1		1	<b>6</b>
	Pract		3		4		3		2	3		3		3		3	<b>24</b>
	SIWT		1		1		1		1	1		1		1		2	<b>9</b>
	SIW		6		7		5		6	6		6		6			<b>42+9(PA)= 51</b>

**7. Information about teachers**

No.	FULL NAME	Degrees and position	Email address	Scientific interests etc.	Note
1	Sadykova Aliya Shamilevna	Head of the department of pathology and forensic medicine, doctor of medical sciences, acting professors	aliya.sadykova.66@mail.ru	The topic of the scientific interests is “Pathology of the immune system, pathological anatomy of tumors”	Author of 84 scientific publications, 5 textbooks, 1 patent for invention, 1 monograph
2	Kerimov Rassim Azatovich	Master, Senior teacher	Kir-2004 @list.ru	The topic of the scientific interests is “Diagnostics and prevention of colorectal cancer”	Author of 20 scientific publications
3	Ignatyeva Anastassiya Sergeevna	Senior teacher	zhelonkina_88@mail.ru	-	-
4	Berdaliev Gulmira Bakhytkyzy	Senior Lecturer	Mira -3505 @mail. ru	-	Author of 6 scientific publications
5	Kerimbekova Mariam Otelovna	Teacher	-	-	-
6	Kurymbaeva Ainur Rashidkyzy	Assistant	Smp_zoj @mail.ru	-	-

7	Seydakbar Aysana Usenovna	Teacher	aseydakbar @ mail.ru	-	Author of 2 scientific publications
8	Edige Aidana Zhandoskyzy	Assistant	a.edige93 @mail.ru	The topic of the scientific interests is "Shymkent kalasy er azamattarynyn arasynda myocardial infarction damuyna climatic factorlardyn aseri"	
9	Duysembieva Zhazira Merey k yzy	Teacher	zhazira0508 @mail.ru	The topic of the scientific interests "Ontustik Kazakhstan aymagyndagy turgyndardyn salauatty omir saltyn kalyptastyrudyn gylymi negizderi"	Author of 3 scientific publications

8. Thematic plan							
Day	Class form	Topic name	Summary	LO of the module	Number of hours	Forms/ methods/ educational technologies	Forms/ assessment methods
1	Pathological physiology. Lecture 1	Subject, tasks and methods of pathological physiology. General nosology. General etiology and pathogenesis	Subject, tasks and methods of pathological physiology. General nosology. Disease, concept, stages. Pre-disease, concept. General etiology and pathogenesis. Etiological factors, types. The main link in pathogenesis. Clinical significance	LO1	1	Review lecture	Blitz survey Feedback
	Pathological physiology. Practical lesson 1	Subject, tasks and methods of pathological physiology. General nosology. General etiology and pathogenesis	Subject, tasks and methods of pathological physiology. General nosology. Disease, concept, stages. Pre-disease, concept. General etiology and pathogenesis. Etiological factors, types. The main link in pathogenesis. Clinical significance	LO2 LO3 LO4	3	Work in small groups, discussion of the topic, case - study	Check list
	Pathological physiology. SIWT/SIW 1	The action of pathogenic environmental factors. The role of reactivity in pathology	Damaging effect on the body of mechanical and physical factors. Pathogenic effects of sound, temperature, electric current. Reactivity and resistance, concept, types, forms. Factors determining reactivity. Clinical significance	LO2 LO3 LO4	1/6	Case - study	Check list
2	Pathological anatomy. Lecture 1	Subject, goals, objectives, objects, methods and levels of	Subject, goals, objectives, objects, methods and levels of research in pathological anatomy. Autopsy. Biopsy.	LO1	1	Review lecture	Blitz survey Feedback

		research in pathological anatomy	Experiment. Clinical significance				
	Pathological anatomy. Practical lesson 1	Subject, goals, objectives, objects, methods and levels of research in pathological anatomy	Subject, goals, objectives, objects, methods and levels of research in pathological anatomy. Autopsy. Biopsy. Experiment. Clinical significance	LO2 LO3 LO4	3	Discussion of the topic, description of macro- and micropreparations with conclusion, case study	Check list
	Pathological anatomy. SIWT/SIW 1	Cell pathology	Participation in autopsies at a clinical base	LO2 LO3 LO4	1/6	Autopsy	Check list
3	Pathological physiology. Lecture 2	Cell pathology	Cell damage, concept, types, causes, mechanisms. Free radical lipid peroxidation. Mechanisms of cell protection and adaptation during damage. Antioxidant systems. Clinical significance	LO1	1	Review lecture	Blitz survey Feedback
	Pathological physiology. Practical lesson 2	Cell pathology	Cell damage, concept, types, causes, mechanisms. Free radical lipid peroxidation. Mechanisms of cell protection and adaptation during damage. Antioxidant systems. Clinical significance	LO2 LO3 LO4	3	Work in small groups, discussion of the topic, case - study	Check list
	Pathological physiology. SIWT/SIW 2	The role of heredity in pathology. General body reactions to damage	Mutations. Classification of hereditary pathology. Etiology and pathogenesis of gene and chromosomal diseases. Stress, concept, stages. "Selye's Triad". Shock, concept, stages, types. Coma, concept, types, main links in pathogenesis. Clinical significance	LO2 LO3 LO4	1/6	Case - study	Check list
4	Pathological anatomy. Practical lesson 2	Cell pathology. Protein metabolism disorder	Alteration. Dystrophies. Classification. Parenchymal protein, lipid, carbohydrate degenerations. Etiology, pathogenesis, morphogenesis, pathological anatomy. Outcome. Clinical significance	LO2 LO3 LO4	4	Discussion of the topic, description of macro- and micropreparations with conclusion, case study	Check list
	Pathological anatomy. SIWT/SIW 2	Metabolic disorders	Protein, lipid, carbohydrate stromal-vascular dystrophies. Etiology, pathogenesis, morphogenesis, pathological anatomy. Outcome. Clinical significance	LO2 LO3 LO4	1/7	Case - study	Check list
5	Pathological physiology. Practical lesson 3	Disorders of carbohydrate metabolism.	Disorders of digestion, absorption, storage and intermediate metabolism of	LO2 LO3 LO4	4	Work in small groups,	Check list

		Disorders of lipid metabolism.	carbohydrates. Hypoglycemia and hyperglycemia, types, causes. Disorders of digestion, absorption and transport of lipids. Hyperlipemia. Obesity, causes, types. Clinical significance			discussion of the topic, case - study	
	Pathological physiology. SIWT/SIW 3	Disorders of protein metabolism Disorders of mineral metabolism and vitamin metabolism	Disorders of the breakdown of food proteins, endogenous protein synthesis and breakdown, amino acid metabolism and the final stage of protein metabolism. Fasting, forms, periods. Disorders of macro- and microelements, manifestations. Hypo- and hypervitaminosis, mechanisms of development and manifestations. Clinical significance	LO2 LO3 LO4	1/7	Case - study	Check list
6	Pathological anatomy. Lecture 2	Metabolic disorders	Mixed dystrophies. Etiology, pathogenesis, morphogenesis, pathological anatomy. Outcome. Clinical significance	LO1	1	Review lecture	Blitz survey Feedback
	Pathological anatomy. Practical lesson 3	Metabolic disorders	Mixed dystrophies. Etiology, pathogenesis, morphogenesis, pathological anatomy. Outcome. Clinical significance	LO2 LO3 LO4	3	Discussion of the topic, description of macro- and micropreparations with conclusion, case study	Check list
	Pathological anatomy. SIWT/SIW 3	Mineral metabolism disorders	Mineral dystrophies. Classification, mechanism of development of mineral dystrophies. Stone formation. Consequences of stone formation. Clinical significance	LO2 LO3 LO4	1/5	Case - study	Check list

7	Pathological physiology. Lecture 3	Hypoxia. Peripheral circulation disorders	Hypoxia, concept, types, etiology, pathogenesis, compensatory reactions. Shifts of oxyhemoglobin dissociation curve. Forms of peripheral circulatory disorders. Arterial hyperemia, venous hyperemia, ischemia, stasis, thrombosis and embolism, concept, causes, development mechanisms, symptoms, consequences. Clinical significance	LO1	1	Review lecture	Blitz survey Feedback
	Pathological physiology. Practical lesson 4	Hypoxia. Peripheral circulation disorders	Hypoxia, concept, types, etiology, pathogenesis, compensatory reactions. Shifts of oxyhemoglobin dissociation curve. Forms of peripheral circulatory disorders. Arterial hyperemia, venous hyperemia, ischemia, stasis, thrombosis and embolism, concept, causes, development mechanisms, symptoms, consequences. Clinical significance	LO2 LO3 LO4	3	Work in small groups, discussion of the topic, case - study	Check list
	Pathological physiology. SIWT 4	Midterm examination No. 1	Topics of lectures, practical classes, individual work, completed during 1-7 days of training	LO1 LO2 LO3 LO4	2	Integrated control of educational achievements with use of control study cases, testing	Check list
8	Pathological anatomy. Practical lesson 4	Necrosis	Necrosis. Mechanism of development, classification of necrosis. Microscopic signs of necrosis. Outcome. Clinical significance	LO2 LO3 LO4	2	Discussion of the topic, description of macro- and micropreparations with conclusion, case study	Check list
	Pathological anatomy. SIWT 4	Disorders of tissue fluid exchange	Disorder of tissue fluid content. Increased tissue fluid content. Decreased tissue fluid content. Mechanism of development. Classification. Macro- and microscopic signs. Clinical significance	LO2 LO3 LO4	1/6	Case - study	Check list
	Pathological physiology. Practical lesson 5	Disorders of water and electrolyte metabolism	Water balance, types. Dehydration, concept, types, causes, mechanisms of development. Overhydration,	LO2 LO3 LO4	2	Work in small groups, discussion of the topic,	Reverse connection

			concept, types, causes, mechanisms of development. Edema and effusion, concept, types, pathogenetic factors. Clinical significance			case - study	
	Pathological physiology. SIWT/SIW 5	Acid-base disorders	Classification of acid-base disorders. Acidoses and alkaloses, types, causes, clinical and laboratory manifestations, compensation mechanisms. Clinical significance	LO2 LO3 LO4	1/6	Case - study	Check list
9	Pathological anatomy. Lecture 3	Circulatory disorders	Hyperemia. Arterial hyperemia. Venous congestion. Clinical significance	LO1	1	Review lecture	Feedback
	Pathological anatomy. Practical lesson 5	Circulatory disorders	Venous congestion. Anemia. Types. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Outcome. Clinical significance	LO2 LO3 LO4	3	Discussion of the topic, description of macro- and micropreparations with conclusion, case study	Check list
	Pathological anatomy SIWT/SIW 5	Circulatory disorders	Bleeding. Plasmorrhagia. Stasis. Thrombosis. Morphology of the thrombus. Morphogenesis of thrombosis. Embolism. Types. Pathological anatomy. Outcome. DIC syndrome. Shock. Clinical significance	LO2 LO3 LO4	1/6	Case - study	Check list
10	Pathological physiology. Lecture 4	Inflammation	Inflammation, concept, etiology, pathogenesis, types, course, outcomes, manifestations. Alteration, mediators of inflammation. Microcirculation disorders at the site of inflammation. Exudation and emigration of leukocytes, mechanisms. Proliferation. Clinical significance	LO1	1	Review lecture	Feedback
	Pathological physiology. Practical lesson 6	Inflammation	Inflammation, concept, etiology, pathogenesis, types, course, outcomes, manifestations. Alteration, mediators of inflammation. Microcirculation disorders at the site of inflammation. Exudation and emigration of leukocytes, mechanisms. Proliferation. Clinical significance	LO2 LO3 LO4	3	Work in small groups, discussion of the topic, case - study	Check list

	Pathological physiology. SIWT/SIW 6	Pathophysiology of the infectious process Fever	Infectious process, concept, causes, mechanisms of development. Sepsis, concept, types. Fever, concept, etiology, pathogenesis, stages, types, meaning. Metabolism and organ function during fever. Difference between fever and hyperthermia. Clinical significance	LO2 LO3 LO4	1/6	Case - study	Check list
11	Pathological anatomy. Lecture 4	Inflammation	Inflammation. Exudative inflammation. Proliferative inflammation. Pathological anatomy. Clinical significance	LO1	1	Review lecture	Blitz survey Feedback
	Pathological anatomy. Practical lesson 6	Inflammation	Inflammation. Exudative inflammation. Proliferative inflammation. Immune inflammation. Pathological anatomy. Outcome. Clinical significance	LO2 LO3 LO4	3	Discussion of the topic, description of macro- and micropreparations with conclusion, case study	Check list
	Pathological anatomy. SIWT/SIW 6	Inflammation	Pathological anatomy of sepsis. Clinical significance	LO2 LO3 LO4	1/6	Case - study	Check list
12	Pathological physiology. Lecture 5	Immunopathological processes	Allergy, concept, etiology. Types of allergens. Sensitization. Classifications and general pathogenesis of allergic reactions. Pathogenesis of allergic reactions of types I, II, III, IV. Clinical significance	LO1	1	Review lecture	Blitz survey Feedback
	Pathological physiology. Practical lesson 7	Immunopathological processes	Allergy, concept, etiology. Types of allergens. Sensitization. Classifications and general pathogenesis of allergic reactions. Pathogenesis of allergic reactions of types I, II, III, IV. Clinical significance	LO2 LO3 LO4	3	Work in small groups, discussion of the topic, case - study	Check list
	Pathological physiology. SIWT/SIW 7	Immunopathological processes	Immunodeficiency conditions, concept, types, mechanisms of formation, manifestation. AIDS, etiopathogenesis, stages, manifestations. Autoimmune process, concept, stages of development. Pathogenetic classes of autoimmune diseases. Clinical significance	LO2 LO3 LO4	1/6	Case - study	Check list



13	Pathological anatomy. Lecture 5	Immunopathological processes	Morphology of disorders of immunogenesis. Pathology of the thymus, peripheral lymphoid tissue with disorders of immunogenesis. Hypersensitivity reactions. Clinical significance	LO1	1	Review lecture	Blitz survey Feedback
	Pathological anatomy. Practical lesson 7	Immunopathological processes	Morphology of disorders of immunogenesis. Pathology of the thymus, peripheral lymphoid tissue with disorders of immunogenesis. Hypersensitivity reactions. Autoimmunization and autoimmune diseases. Immunodeficiency syndromes. Primary and secondary immunodeficiency syndromes. Clinical significance	LO2 LO3 LO4	3	Discussion of the topic, description of macro- and micropreparations with conclusion, case study	Check list
	Pathological anatomy. SIWT/SIW 7	Compensatory adaptive processes. Regeneration	Regeneration. Processes of adjustment (adaptation) and compensation. Sclerosis. Clinical significance	LO2 LO3 LO4	1/6	Case - study	Check list
14	Pathological physiology. Lecture 6	Tumors	Tumors, concept, types, etiology. Pathogenesis of tumor growth. Paraneoplastic syndromes, concept, manifestations. Cancer cachexia, concept, pathogenesis. Mechanisms of antitumor resistance of the body. Clinical significance	LO1	1	Review lecture	Blitz survey Feedback
	Pathological physiology. Practical lesson 8	Tumors	Tumors, concept, types, etiology. Pathogenesis of tumor growth. Paraneoplastic syndromes, concept, manifestations. Cancer cachexia, concept, pathogenesis. Mechanisms of antitumor resistance of the body. Clinical significance	LO2 LO3 LO4	3	Work in small groups, discussion of the topic, case - study	Check list
	Pathological physiology. SIWT/SIW 8	Pathology of tissue growth	Disorder of the main periods of human growth. Hypo- and hyperbiotic processes, types, dysfunction of organs. Clinical significance	LO2 LO3 LO4	1/5	Case - study	Check list
15	Pathological anatomy. Lecture 6	Tumors	Tumors of epithelial coverings and endocrine glands. Precancer concept. Mesenchymal tumors. Tumors of melanin-forming tissue and nervous system. Benign and malignant tumors. Cancer. Sarcoma. Metastasis. Clinical significance	LO1	1	Review lecture	Blitz survey Feedback

	Pathological anatomy. Practical lesson 8	Tumors	Tumors of epithelial coverings and endocrine glands. Precancer concept. Mesenchymal tumors. Tumors of melanin-forming tissue and nervous system. Benign and malignant tumors. Cancer. Sarcoma. Metastasis. Clinical significance	LO2 LO3 LO4	3	Discussion of the topic, description of macro- and micropreparations with conclusion, case study	Check list
	Pathological anatomy. SIWT 8	Midterm examination No. 2	Topics of lectures, practical classes, individual work, completed during 8-15 days of training	LO1 LO2 LO3 LO4	2	Integrated control of educational achievements with use of control study cases, testing	Check list
8.1	Preparation and conduct of intermediate certification						18 hours
<b>9. Teaching methods</b>							
9.1	Lectures	Review lectures					
9.2	Practical lessons	Work in small groups, discussion of the topic, case - study, description of macro- and micropreparations with conclusion					
9.3	SIWT/SIW	Case - study, autopsy					
9.4	Midterm examination	Integrated control of educational achievements with use of control study cases, testing					
<b>10. Assessment criteria</b>							
<b>10.1 Criteria for assessing the results of the discipline</b>							
<b>No. RO</b>	<b>Name of learning outcomes</b>	<b>Unsatisfactory</b>	<b>Satisfactorily</b>	<b>Good</b>	<b>Excellent</b>		
LO 1	Demonstrates knowledge of general pathology, understanding of the patterns of development of changes in cells and tissues in various pathological conditions	Does not explain the patterns of development of changes in cells and tissues in various pathological conditions	Experiences difficulties in explaining the patterns of development of changes in cells and tissues in various pathological conditions	Explains the patterns of development of changes in cells and tissues in various pathological conditions	Freely explains the pattern and development of changes in cells and tissues in various pathological conditions		
LO 2	Explains the etiology, pathogenesis, morphogenesis of general pathological processes	Does not demonstrate knowledge of the etiology, pathogenesis, morphogenesis of general pathological processes	Demonstrates knowledge of etiology, pathogenesis, morphogenesis of general pathological processes, but makes gross mistakes	Demonstrates knowledge of etiology, pathogenesis, morphogenesis of general pathological processes, but allows unprincipled inaccuracies	Demonstrates knowledge of etiology, pathogenesis, morphogenesis of general pathological processes		
LO 3	Determines pathological changes and functional disorders at the organ, tissue and cellular levels, describes macro- and micropreparations and analyzes the results of clinical, laboratory and experimental studies	1. Does not determine pathological changes and functional disorders at the organ, tissue and cellular levels.	1. Determines pathological changes and functional disorders at the organ, tissue and cellular levels.	1. Determines pathological changes and functional disorders at the organ, tissue and cellular levels.	1. Independently determines pathological changes and functional disorders at the		

		2. Does not describe macro- and micro - preparations and does not analyze the results of clinical, laboratory and experimental studies	2. Describes macro- and micro - preparations and analyzes the results of clinical laboratory and experimental studies, but makes gross mistakes	2. Describes macro- and micro - preparations and analyzes the results of clinical laboratory and experimental studies, but allows minor inaccuracies	organ, tissue and cellular levels. 2. Independently describes macro- and micro - preparations and analyzes the results of clinical laboratory and experimental studies
LO 4	Makes conclusions on macro- and micropreparations, as well as on the results of clinical, laboratory and experimental studies and predicts outcomes of pathological changes in organs and tissues during general pathological processes when solving cases	1. Does not make conclusions on macro- and micro - preparations, as well as on the results of clinical, laboratory and experimental studies in general pathological processes. 2. Does not predict the outcomes of pathological changes in organs and tissues during general pathological processes when solving cases	1. Makes conclusions on macro- and micro - preparations, as well as on the results of clinical, laboratory and experimental studies in general pathological processes, but makes gross mistakes. 2. Predicts the outcomes of pathological changes in organs and tissues during general pathological processes, but makes gross mistakes when solving cases	1. Makes conclusions on macro- and micro - preparations, as well as on the results of clinical, laboratory and experimental studies in general pathological processes, but allows unprincipled inaccuracies. 2. Predicts the outcomes of pathological changes in organs and tissues during general pathological processes, but allows unprincipled inaccuracies when solving cases	1. Independently makes conclusions on macro- and micro - preparations, as well as on the results of clinical, laboratory and experimental tests research in general pathological processes. 2. Independently predicts the outcomes of pathological changes in organs and tissues during general pathological processes when solving cases

## 10.2 Criteria for assessing teaching methods and technologies

### Multi-point knowledge assessment system

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

**Checklist for class**

<b>Form of control</b>	<b>Grade</b>	<b>Criteria of assessment</b>
Work in small groups (for practical work )	Excellent corresponds to points 95-100 90-94	- 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 research results; - did the right conclusion, showed original thinking
	Good corresponds to points 85-89 80-84 75-79 70-74	- completed the practical work in a timely manner and submitted a report on it, allowing unprincipled errors; - took an active part in the discussion of research results;
	Satisfactorily corresponds to points 65-69 60-64 50-54	- completed the practical work in a timely manner and submitted a report on it, allowing fundamental errors; - was not active during the discussion, needed help of teacher
	Unsatisfactory corresponds to points 25-49	- failed to submit a report on time practical work, made serious mistakes, did not complete all the practical work, provided for by the program; - did not participate in the discussion of the results of the work
	Unsatisfactory corresponds to points 0-24	
Case - study	Excellent corresponds to points 95-100 90-94	- solved cases within a certain time; - gave complete answers to all questions
	Good corresponds to points 85-89 80-84 75-79 70-74	- solved cases within a certain time; - gave complete answers to all questions; - when solving cases made unprincipled mistakes
	Satisfactorily corresponds to points 65-69 60-64 50-54	- solved cases within a certain time; - gave incomplete answers to questions; - made fundamental mistakes when solving cases
	Unsatisfactory corresponds to points 25-49	- solved the cases incorrectly or did not solve them at all; - made serious mistakes when solving cases
	Unsatisfactory corresponds to points 0-24	
Work in small groups (interpretation of the results of clinical and laboratory data)	Excellent corresponds to points 95-100 90-94	- correctly, without any errors, interpreted the results of clinical and laboratory data; - made a reasonable conclusion
	Good corresponds to points 85-89 80-84 75-79	- correctly interpreted the results of clinical and laboratory data, making unprincipled errors; - made a reasonable conclusion

	70-74	
	Satisfactorily corresponds to points 65-69 60-64 50-54	- correctly interpreted the results of clinical and laboratory data, making fundamental errors; - made an unfounded conclusion
	Unsatisfactory corresponds to points 25-49	- incorrectly interpreted the results of clinical and laboratory data, making gross mistakes; - did not make a conclusion
	Unsatisfactory corresponds to points 0-24	
Discussion of the topic	Excellent corresponds to points 95-100 90-94	- did not make any mistakes during the discussion; - was oriented in the theories, concepts and directions of general pathology and gave them a critical assessment; - used scientific achievements of other disciplines
	Good corresponds to points 85-89 80-84 75-79 70-74	- during the discussion he did not make gross mistakes, but made inaccuracies and unprincipled errors, which he corrected himself; - managed systematize program material with the help of a teacher
	Satisfactorily corresponds to points 65-69 60-64 50-54	- made fundamental mistakes during the discussion; - limited himself only to educational literature indicated by the teacher; - experienced great difficulties in systematizing the material
	Unsatisfactory corresponds to points 25-49	- made serious mistakes during the discussion; - did not study the basic literature on the topic of the lesson; - failed to use the scientific terminology of general pathology
	Unsatisfactory corresponds to points 0-24	
	Testing	Excellent corresponds to points 95-100 90-94
Good corresponds to points 85-89 80-84 75-79 70-74		- performed correctly 70-89% of test tasks
Satisfactorily corresponds to points 65-69 60-64 50-54		- performed correctly 50-69% of test tasks
Unsatisfactory corresponds to points 25-49		- performed correctly in less than 50% test tasks
Unsatisfactory corresponds to points 0-24		

### Checklist for answers to the description of macropreparations

No.	Evaluation criterion/score	Excellent	Good	Satisfactory	Unsatisfactory
1	Organ name	4	3	2	0
2	Organ size	10	7	5	0
3	Surface: condition of the capsule or serosa, dullness, shine, coverings	1	1	1	0
4	Characteristics of the pathological focus: Localization, size, shape (if the ulcer – bottom condition), color, consistency	5	4	2	0
5	Pathological diagnosis/conclusion				
6	Total	20	15	10	0

### Checklist for answers to the description of micropreparations

No	Evaluation criterion/score	Excellent	Good	Satisfactory	Unsatisfactory
1	Name of 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

### 11. Learning Resources

Electronic resources	<p><b>Патологическая физиология:</b>  <a href="https://www.aknurpress.kz/reader/web/2476">https://www.aknurpress.kz/reader/web/2476</a>  <a href="https://www.elib.kz/ru/search/read_book/472/">https://www.elib.kz/ru/search/read_book/472/</a>  <a href="https://www.elib.kz/ru/search/read_book/471/">https://www.elib.kz/ru/search/read_book/471/</a>  <a href="https://www.elib.kz/ru/search/read_book/473/">https://www.elib.kz/ru/search/read_book/473/</a>  <a href="https://www.elib.kz/ru/search/read_book/91/">https://www.elib.kz/ru/search/read_book/91/</a>  <a href="https://www.elib.kz/ru/search/read_book/88/">https://www.elib.kz/ru/search/read_book/88/</a>  <a href="https://www.elib.kz/ru/search/read_book/98/">https://www.elib.kz/ru/search/read_book/98/</a>  <a href="https://www.elib.kz/ru/search/read_book/96/">https://www.elib.kz/ru/search/read_book/96/</a>  <a href="https://www.elib.kz/ru/search/read_book/100/">https://www.elib.kz/ru/search/read_book/100/</a>  <a href="https://www.elib.kz/ru/search/read_book/896/">https://www.elib.kz/ru/search/read_book/896/</a>  <a href="https://www.elib.kz/ru/search/read_book/895/">https://www.elib.kz/ru/search/read_book/895/</a>  <a href="https://www.aknurpress.kz/reader/web/2583">https://www.aknurpress.kz/reader/web/2583</a>  <a href="https://www.aknurpress.kz/reader/web/1016">https://www.aknurpress.kz/reader/web/1016</a>  <a href="https://www.aknurpress.kz/reader/web/1449">https://www.aknurpress.kz/reader/web/1449</a>  <a href="https://www.iprbookshop.ru/10144.html">https://www.iprbookshop.ru/10144.html</a>  <a href="https://www.iprbookshop.ru/91045.html">https://www.iprbookshop.ru/91045.html</a></p>	<p><b>Патологическая анатомия:</b>  <a href="https://www.elib.kz/ru/search/read_book/861/">https://www.elib.kz/ru/search/read_book/861/</a>  <a href="https://www.aknurpress.kz/reader/web/2357">https://www.aknurpress.kz/reader/web/2357</a>  <a href="https://aknurpress.kz/reader/web/2423">https://aknurpress.kz/reader/web/2423</a>  <a href="http://rmebrk.kz/book/15133">http://rmebrk.kz/book/15133</a>  <a href="https://elib.kz/ru/search/read_book/144/">https://elib.kz/ru/search/read_book/144/</a>  <a href="https://elib.kz/ru/search/read_book/141/">https://elib.kz/ru/search/read_book/141/</a>  <a href="https://aknurpress.kz/reader/web/1016">https://aknurpress.kz/reader/web/1016</a>  <a href="https://www.iprbookshop.ru/74392.html">https://www.iprbookshop.ru/74392.html</a>  <a href="https://www.iprbookshop.ru/6074.html">https://www.iprbookshop.ru/6074.html</a>  <a href="https://www.iprbookshop.ru/6211.html">https://www.iprbookshop.ru/6211.html</a>  <a href="https://www.iprbookshop.ru/20116.html">https://www.iprbookshop.ru/20116.html</a>  <a href="https://www.iprbookshop.ru/31850.html">https://www.iprbookshop.ru/31850.html</a>  <a href="https://www.elib.kz/ru/search/read_book/846/">https://www.elib.kz/ru/search/read_book/846/</a>  <a href="https://www.aknurpress.kz/reader/web/1041">https://www.aknurpress.kz/reader/web/1041</a>  <a href="https://mbook.kz/viewer/course/854">https://mbook.kz/viewer/course/854</a>  <a href="https://www.iprbookshop.ru/119965.html">https://www.iprbookshop.ru/119965.html</a></p>
Electronic textbooks	<p><b>Патологическая физиология:</b>            1. Патологиялық физиология. Тәжірибелік сабақтарға нұсқау [Электронный ресурс] : оқу құралы = Патофизиология. Руководство к практическим занятиям : учебное пособие / қаз. тіліне ауд. С. Б. Жәутікова ; ред. В. В. Новицкий. - Электрон. текстовые дан. (63,4Мб). - М. : ГЭОТАР - Медиа, 2014. - 768 бет. эл. опт. диск (CD-ROM)            2. Адам физиологиясы. Динамикалық сызбалар атласы [Электронный ресурс] : оқулық / К. В. Судаков [ж.б.] ; қазақ тіл. ауд. М. Қ. Қанқожа. - Электрон. текстовые дан. (105Мб). - М. : ГЭОТАР - Медиа, 2017. - 464б.            3. Патологиялық физиология. Досжанова М.П., – Алматы: Эверо, 2015 ЦБ Aknurpress / <a href="https://www.aknurpress.kz/reader/web/2476">https://www.aknurpress.kz/reader/web/2476</a></p>	

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Klatt, Edward C Robbins and Cotran Atlas of Pathology : textbook / Edward C. Klatt. - 3th ed. - Philadelphia : Elsevier Saunders, 2014. - 587 p.

## 12. Discipline policy

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

- 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;
- during quarantine, wear medical masks and comply with the sanitary and epidemiological regime;
- 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 class: syllabus, guidelines for classes, lectures, notebook and textbook;
- 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 gum, do not eat food, do not use the telephone, 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;
- carry out SIW in a timely manner.

### Penalties for failure to complete sections of work:

- If you miss lectures without a good reason, your midterm test score will be reduced – 1 point for each missed lecture;
- if you miss the SIWT without a good reason, the midterm control score is reduced - 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 dean's office of the faculty.

### Criteria for non-admission to final examination:

a student who received an unsatisfactory grade for one of the types of controls (ME 1, ME 2, average rating of the current control) is not allowed to take the final examination in the discipline.

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

SKMA Regulations and Rules. Academic Policy.

P.4 Student Code of Honor

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.

$$\text{Final score (100\%)} = \text{RA (60\%)} + \text{FC (40\%)}$$

$$\text{RA (60\%)} = \text{ME avg (20\%)} + \text{CC avg (40\%)}$$

$$\text{RK av} = (\text{RK 1} + \text{RK 2}) : 2$$

$$\text{Final score (100\%)} = \text{ME avg} \times 0.2 + \text{CC avg} \times 0.4 + \text{FC} \times 0.4$$

RA – rating of allowance

FC - assessment of final control

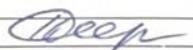



ME avg – average score of midterm control, taking into account penalty points

CC av – average assessment of current control taking into account SIW

ME 1 – midterm examination 1

ME 2 – midterm examination 2

#### 14. Agreement, approval and revision

Date of agreement with the Library and Information Center	Protocol No.	FULL NAME of head of the LIC	Signature
14.06.24	9	Darbicheva R.I.	
Date of approval by the department	Protocol No.	FULL NAME of head	Signature
24.06.24	3	Сарғандықов А.Н.	
Date of approval on AK EP	Protocol No.	FULL NAME of Chairman of the CEP	Signature
26.05.24	11		
Date of revision at the department	Protocol No.	FULL NAME of head	Signature
14.06.24	11	Колменов Ч.Д.	
Date of revision on AK EP	Protocol No.	FULL NAME of Chairman of the CEP	Signature