Department of Normal and Pathological Physiology

Syllabus, GM, 2<sup>nd</sup> year

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# Department of Normal and Pathological Physiology Working program of the discipline (Syllabus)

**Educational program 'General Medicine'** 

1.	General information about the discipline					
1.1	Discipline code: MF-2201-	2	1.6	Academic years: 2022-2023		
1.2	Discipline name: 'Morphol	ogy and Physiology'	1.7	Year: 2		
1.3	<b>Prerequisites:</b> basics of ana physiology.	ntomy, histology, and	1.8	Semester: 3		
1.4	<b>Postrequisites:</b> general path (pathological anatomy, path physiology).	-	1.9	Number of credits (ECTS): 4		
1.5	Cycle: BD		1.10	Component: compulsory		
2.	Discipline description (up	to 150 words)				
organisn an organ	n, physiological systems, organism interacts with an environn	ns, cells and individual cell nent.		out the vital activity of the whole is, mechanisms of regulation when		
3.	Summative assessment for	rms				
3.1	MCQ testing		3.5	Course work		
3.2	Writing +		3.6	Essay		
3.3	Oral response		3.7	Project		
3.4	OSPE / OSCE or testing pra	actical skills +	3.8	Other (specify)		
4.	Goals of the discipline					
	mechanisms regulating them.		ons of an body	systems of a healthy person and		
5.	Learning outcomes (LO)	of the teaching				
LO1	Demonstration of knowledg the fundamental laws of org	1 0	phy, the functi	ons of organs and organ systems,		
LO2	Demonstration of knowledg physiological preparations,		working with a	anatomical, histological,		
LO3	Identification of organs, the description of their function	•	n anatomical a	and histological preparations and		
LO4	Skills of diagnostics at the n		sconic levels:			
LO5		wledge on anatomy, histol		iology for mastering the skills of		
LO6	- ·		on of organs a	nd their parts on the body surface.		
5.1	The discipline learning			ne LOs are connected to		
	outcomes (LO of the discipline)					
5.1	LO1	sciences for diagnostics common diseases in adu	, treatment, dyn alts and childre			
	LO2	conduct outpatient ap	pointments, cation of child	ased medicine, a student is able to diagnostics, treatment, dynamic ren and adults, including pregnant hospitalization.		

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LO3 A student is able to provide emergency and fast, qualified medical care of the fundamental category of complexity to patients of adults and children. A student analyzes the results of screening programs, carries out LO4 prevention of common diseases, vaccination and finds sources of information for the development of primary health care. A student complies with the principles of organizing general medical LO<sub>5</sub> practice and achieves the goals of providing qualified care at the primary health care level. A student communicates effectively in medical practice, taking into LO<sub>6</sub> account the peculiarities of the psychology of children and adults, multiculturalism, keeping the principles of medical ethics and deontology.

6.	Details of the di	scipline						
6.1	Location of the Department (the building, rooms): Shymkent city, Al-Farabi square, educationa No. 2, 4th-5th floors; tel.: 40-82-26 (422,423)							
6.2	Number of hours	Lectures	Practical lessons		ssons Student's individual work (SIW)		Student and teacher's individual work (SIWT)	
		10	30	-		56	24	
7.	Information on	teachers						
№	Full name	Degree and position	e-mail		Scienti	fic interests, etc.	Achievements	
1.	Zhakipbekova Galiya Saparkyzy	head of the department, candidate of biological sciences, acting professor	Galiya_074@i	mail.	Works on the topic "Influence of bioslastilin on the processes of lipid peroxidation in the hepatocyte and blood plasma during phosphorus intoxication"		Author of 35 scientific publications, prepared 1 prepatent, 1 patent	
2.	Kerimov Rassim A	senior teacher, master of medicine	kir- 2004@lis	t.ru	The theme of a doctoral dissertation is 'Diagnostic criteria and risk factors for colorectal cancer in Kazakhstan.'		Author of more than 25 scientific articles, including one indexed by the Scopus database (percentile – 45); provides physiology lectures and practical classes in English.	
3.	Satybaldieva Nazgul	master, senior teacher	n_a_z_i_92 @mail.ru		_	ic of the ic-research	Provide practical physiology	

work is «Тыныс

classes in Kazakh

Mutalkhankyzy

**MEDISINA** AKADEMIASY SOUTH KAZAKHSTAN **MEDICAL** 

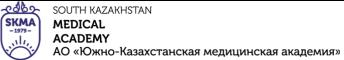
SKMA -1979 -ACADEMY АО «Южно-Казахстанская медицинская академия» «Оңтүстік Қазақстан медицина академиясы» АҚ

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					жүйесі Аурулары туындайты мүгедекті әлеуметті медицина мәселелер Author of scientific a	ын ктің к- лық vi». 8	and	Russian.
4.	Izbasarova Madina Seisenalikyzy	master, senior teacher	madiko91.91@ma il.ru		The topic of scientific-rework is «С ауданы ке отбасылары аурушанд көрсеткіш деңгейі мо құрылымы Author of scientific a	research Сайрам эпбалалы эы ның ық гінің ен ы».		
8.	Thematic plan							
Week / day	Theme	Brief Descripti	on	The discipline learning outcomes (the discipline LO)	Duration (hours)	Forms Method Learnin Technolo	ls / ng	Forms / methods of assessment
1	Lecture. Physiology of the central nervous system.	Motor, sensory, regulatory, conductive and integrative functions of the spinal cord, medulla oblongata, hindbrain, midbrain, diencephalon and cerebral hemispheres.		PO1	1	Review		_
	Practical lesson. Physiology of the spinal cord.	Structural and functional characteristics of the spinal cord. Ascending and descending pathways of the spinal cord.		PO1	2	Discussion the t practical w MCQ, tasks	topic,	Oral questioning, assessment of MCQ, case tasks
	SIWT. Consultation on SIW preparation The neural pathways of the spinal cord.	and descending tra the spinal Anterolateral sy	the ending	PO1	2/3	Preparation presentatio defence		Checking and presentation

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	T		I			1
		lemniscus pathway. Pyramidal and extra- pyramidal pathways.				
2.	Lecture. Physiology of analyzers.	Three chains of the analyzers. Role of the peripheral, intermediate and central parts. Auditory and visual analyzers.	LO1	1	Review	
	Practical lesson. The Medulla Oblongata, Hindbrain and Midbrain.	Structural and functional characteristics of the medulla oblongata and hindbrain; their relation with other divisions of the central nervous system.	LO1	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. The functions of the main nuclei of the medulla oblongata and hindbrain. The cranial nerves of the medulla oblongata and the pons.	oblongata and pons. Functions of cranial nerves originating there. The mechanism of motor	LO1	2/3	Preparation and presentation defence	Checking and presentation
3	Practical lesson. Physiology of the diencephalon and cerebrum.	Structural and functional characteristics of the diencephalon and cerebral cortex of the hemispheres; their relation with other divisions of the central nervous system. Functions of the basal ganglia and limbic system. The Brodmann's areas.	LO1	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. The functions of the midbrain: four colliculi of the tectum, main nuclei. Main functions of the diencephalon.	Functions of the cranial nerves of the midbrain. Relaying function of the thalamus. The main nuclei of the diencephalon.	LO1	1/4	Preparation and presentation defence	Checking and presentation
4	Lecture. Physiology of the cardiac activity.	Pumping function of the heart. Regulation of cardiac activity. Methods of research of cardiac activity.	LO1	1	Review	_

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# SOUTH KAZAKHSTAN **MEDICAL**

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	Practical lesson. Visual, auditory, vestibular, taste, and olfactory analyzers.	Structural and functional features of the visual, auditory, vestibular, taste, and olphactory analyzers. The mechanism of auditory reception. Interaction between the olfactory, taste and visual analyzers.	LO1	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. The mechanism of gustatory and olfactory reception.	The main parts of the analyzers. Mechanisms of reception of taste and smell.  Nerve pathways of the gustatory and olfactory analyzers. Areas of the cerebral cortex responsible for the taste and smell analyses.	LO1	2/3	Preparation and presentation defence	Checking and presentation
5	Lecture. Physiology of the lymphatic system. Functions of haemopoietic organs. Immunity.	Lymphatic vessels. Circulation of the lymph. Haemopoiesis. Types of immunity.	LOI	1	Review	_
	Practical lesson. Physiology of the heart. Research methods of cardiac activity.	Physiological properties of the cardiac muscle. Phases of the cardiac cycle. Regulation and innervations of the heart. Research methods of cardiac activity.	LOI	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. The nature of the automatism of the cardiac muscle. Features of contraction of the cardiac muscle. The effect of blood electrolytes on cardiac activity	Conductive system of the heart. Features of intracardiac blood circulation. Regulation of cardiac activity. The effect of potassium and calcium on the activity of the cardiac muscle.	LO1	2/3	Preparation and presentation defence	Checking and presentation
6	Practical lesson. Basic laws of haemodynamics.	Parameters of haemodynamics. Nervous and humoral regulation of	LO1	2	Discussion of the topic, practical works, MCQ, case	Oral questioning, assessment of MCQ,

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	SIWT.	blood flow through the blood vessels. Time of blood circulation. Methods of research.	LOI	1/4	tasks	case tasks
	Physiological factors influencing blood pressure.	different vessels. Nervous and humoral regulation of blood flow through the blood vessels. Methods of research	LOI	1/4	Preparation and presentation defence	Checking and presentation
7	Lecture. Physiology of the endocrine glands.	Functions of the hypophysis, epiphysis, thyroid, parathyroid glands, adrenal glands.	LOI	1	Review	-
	Practical lesson. Physiology of the haematopoietic organs.	Role of the red bone marrow, the thymus, the spleen, the liver and lymph nodes in the process of haematopoiesis. Main clinical and haematological research methods of haematopoietic organs.	LO1	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. Midterm examination 1	Themes of lectures, practical classes, SIWs, studied during 1-7 <sup>th</sup> weeks	LO1	2	examination by cards, MCQ testing	Assessment of examination by cards, MCQ testing
8	Lecture. Functions of the digestive system.	Physiology of the digestive system. Motor, secretory, absorptive, and excretory functions. The role of the liver and pancreas in digestion. The role of the microflora of the large intestine.  Defecation.	LO1	1	Review	_
	Practical lesson. Special physiology of the endocrine glands.	Structural and functional characteristics of the hypothalamic-pituitary-adrenal system, epiphysis, thyroid, parathyroid, thymus, pancreas and gonads. Methods of research.	LOI	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. The hypothalamic- pituitary system.	Particular endocrine glands and their hormones.  Main functions of these	LO1	2/3		Checking and

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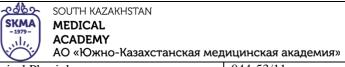


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	Peripheral endocrine glands, their hormones and functions.	hormones. Hyper- and hypoproduction of hormones.			Preparation and presentation defence	presentation
9	Practical lesson. Digestion in the oral cavity and the stomach.	Functions of the gastrointestinal tract. The notion of digestion. Types of digestion. Physical and chemical processing of the food in the oral cavity and the stomach. The composition and function of saliva. Enzymatic properties of gastric juice. Clinical and physiological methods of research.	LOI	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. The functions of the special components of the gastric juice. Pyloric reflex. Hormones which affect the motility and secretion of the stomach.	The composition of the gastric juice. The role of pepsin, rennin (chymosin), gastric lipase, mucin, hydrochloric acid. The mechanism of the pyloric reflex.	LOI	1/4	Preparation and presentation defence	Checking and presentation
10	Lecture. Physiology of respiration.	Regulation of breathing. Transport of gases by blood. Diffusion of gases in different media. Methods for studying the breathing.	LO1	1	Review	-
	Practical lesson. Functions of the small and large intestines. The role of the liver and pancreas for digestion.	Motor, secretory, absorptive and excretory functions of the small and the large intestines. The role of the liver and pancreas in digestion. Role of the large intestine microbiota. Defecation.	LOI	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT.  The functions of the hepatic lobules. The role of the special components of bile and pancreatic juice in digestion.  Microflora of the large intestine.	The functions of the hepatic lobules. The role of the special components of bile and pancreatic juice for digestion. Microflora of the large intestine.	LO1	2/3	Preparation and presentation defence	Checking and presentation

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11	Lecture. Physiology of the excretory system. Skin functions.	Structural and functional unit of the kidneys. Basics of the urine formation. Excretory and non-excretory functions of the skin.	LO1	1	Review	-
	Practical lesson. Physiology of the respiratory system: mechanism of exhalation and inhalation.	Stages of the breathing process. Mechanism of exhalation and inhalation. Lung volumes and lung capacities. The structural and functional unit of the lungs. Blood-air barrier.	LOI	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. The mechanism of inhalation and exhalation. Pulmonary volumes.	The physiological basis of respiration. Vital capacity. Expiratory and inspiratory reserve volumes. Tidal volume.	LO1	2/3	Preparation and presentation defence	Checking and presentation
12	Practical lesson. Physiology of the respiratory system: regulation of breathing	Gas exchange in the lung and systemic circulations. Regulation of breathing.	LO1	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. The mechanisms of diffusion of oxygen and carbon dioxide in the lung and systemic circulations. Regulation of breathing.	Diffusion of gases in the lung and systemic circulation. Oxygen and carbon dioxide transport by the blood. Reflexive and humoral regulation of respiration.	LO1	1/4	Preparation and presentation defence	Checking and presentation
13	Lecture. The regulation of urine formation. Role of the kidneys in regulating the water-electrolyte balance of the body. Urine excretion.	The basic mechanism of urine formation, ways of regulating the water-electrolyte balance of the body. Renin-angiotensin-aldosterone system. The reflex of urination.	LOI	1	Review	_
	Practical lesson. Excretory functions of the kidneys.	Urinary tract. The basic processes of urine formation. The composition of the final	LO1	2	Discussion of the topic, practical works, MCQ, case	Oral questioning, assessment of MCQ,

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	Processes of urine formation.	urine.			tasks	case tasks
	SIWT.  Mechanisms of glomerular filtration, reabsorption and secretion.  Countercurrent Multiplier  System	Filtration pressure. Factors that decrease and increase filtration pressure. The importance of reabsorption and secretion. The physiological significance of the countercurrent multiplier system.	LOI	2/3	Preparation and presentation defence	Checking and presentation
14	Lecture. The human reproductive system. Male and female reproductive systems. Age features.	The role of the human reproductive system. Structural and functional characteristics of the organs of the male reproductive system. Physiology of the female reproductive system. Menstrual cycle. Fertilization. Pregnancy. Childbirth. Lactation. Functions of the mammary glands. Regulation.	LOI	1	Review	
	Practical lesson. Regulation of urine formation. Urine excretion. Functions of the skin.	Non-excretory functions of the kidneys. Regulation of urination. Functions of the bladder. Skin functions.	LO1	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. Midterm examination 2	Themes of lectures, practical classes, SIWs, studied during 9-15 <sup>th</sup> weeks	LO1	1	examination by cards, MCQ testing	Assessment examination by cards, MCQ testing
15	Practical lesson. Human reproductive functions.	The role of the human reproductive system. Structural and functional characteristics of the male and female reproductive organs. Menstrual cycle. Fertilization. Pregnancy. Childbirth. Mammary gland functions.	LOI	2	Discussion of the topic, practical works, MCQ, case tasks	Oral questioning, assessment of MCQ, case tasks
	SIWT. The functions of male and female sex hormones. Ovarian and uterine phases of the menstrual cycle.	Primary and secondary sexual characteristics. Spermatogenesis. Oogenesis. Menstrual cycle.	LO1	1/4	Preparation and presentation defence	Checking and presentation

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	Preparation and	conduct of intermediate attes	tation		12	
9.	Methods of teaching					
9.1	Lectures	Review				
9.2	Practical lessons	discussion of the main points of the theme, performing practical work, MCQ testing, solving case taks				
9.3	SIW/SIWT	Making of an essay, making and defence of apresentation				
9.4	Midterm examination	Examination by cards, MCQ testing				
10.	Assessment cri	teria				
Eval	uation by Letter System	Equivalent of Points	P	ercenta	ige	Evaluation According to the Traditional System
A		4.0	95-100	0%		excellent
A-		3.67	90-949	%		
B+		3.33	85-89	%		good
В		3.0	80-849	%		-
B-		2.67	75-79	%		
C+		2.33	70-749	%		
С		2.0	65-69	%		satisfactorily
C-		1.67	60-64	%		
D+		1.33	55-599	%		
Д-		1.0	50-54%			
$F_{\mathbf{X}}$		0.5	25-49%			unsatisfactory
F		0	0-24%	ó		•
Oral res	sponse	<b>-</b>	1		I	
Form of control		Evaluation			Crit	teria for evaluation
Discussion of the main points of the theme		Excellent Corresponds to points:		mistak direction critical	es, is guid ons of the l evaluati	r, the student does not make any ed in the theories, concepts and discipline studied, gives them a on, and uses the scientific other disciplines.
		Corresponds to points: mistakes but a 85-89 errors correct		es but mak corrected	g, a student does not make gross tes inaccuracies and unprincipled by himself, systematizes the with the help of a teacher.	
		Corresponds to points: 65-69 is		During answering, a student makes fundamental mistakes, is limited only by educational literature indicated by a teacher, faces great difficulties in systematizing the material.		ed only by educational literature eacher, faces great difficulties in
		Unsatisfactory Corresponds to points 25-49	3		es, does n	ng, a student makes gross ot work with the main literature to use the scientific terminology

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	0-24	on histology and physiology.
Practical work, discussion	on of research results	
Form of Control	Evaluation	Criteria for Evaluation
Fulfilment of the practical work	Excellent Corresponds to points: 95-100 90-94	A student fulfils a practical work in time and without any mistakes and provides a report on it, takes an active part in a discussion of the research results, makes sensible conclusions, shows original thinking at the same time.
	Good Corresponds to points: 85-89 80-84 75-79 70-74	A student carries out practical work on time and reports on it, making unprincipled errors, taking an active part in the discussion of the study results.
	Satisfactorily Corresponds to points: 65-69 60-64 50-54	A student carries out practical work on time and reports on it, having made fundamental mistakes, during a discussion does not show activity, needs the help of a teacher.
	Unsatisfactory Corresponds to points 25-49 0-24	A student does not timely report on practical work, makes gross mistakes, does not complete all the practical work envisaged by the program, does not take part in a discussion of results.
MCQ testing		
Form of control	Evaluation	Criteria for Evaluation
MCQ Testing	Excellent Corresponds to points: 95-100 90-94	A student answers correctly 90-100% of the MCQ tasks.
	Good Corresponds to points: 85-89 80-84 75-79 70-74	A student answers correctly 75-89% of the MCQ tasks.
	Satisfactorily Corresponds to points: 65-69 60-64 50-54	A student answers correctly 50-74% of the MCQ tasks.
	Unsatisfactory Corresponds to points 25-49	A student answers correctly less than 50% of the MCQ tasks.

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	0-24	
Solving Case Tasks		
Form of Control	Evaluation	Criteria for Evaluation
Solving Case Tasks	Excellent Corresponds to points: 95-100 90-94	A student actively participates in solving situational problems, shows original thinking, profound knowledge of the material, uses scientific advances of other disciplines during a discussion.
	Good Corresponds to points: 85-89 80-84 75-79 70-74	A student actively participates in the work, shows knowledge of a material, makes non-principle inaccuracies or mistakes, corrected by a student himself.
	Satisfactorily Corresponds to points: 65-69 60-64 50-54	During the work in the group, a student is passive, makes inaccuracies and principle mistakes, experiences great difficulties in systematizing a material.
	Unsatisfactory Corresponds to points 25-49 0-24	A student does not take part in the work of a group; while answering the teacher's questions, a student makes principle mistakes and inaccuracies, does not use scientific terminology in answering.
Preparation and Defense	of an Essay	
Form of Control	Evaluation	Criteria for Evaluation
Preparation and defence of an essay	Excellent Corresponds to points: 95-100 90-94	A student prepares an essay on a topic by an appointed time, independently, accurately, with the volume of at least 10 pages of an A4 format with a single line spacing and a font size of 14, using at least 5 sources; in the essay, there is a detailed plan, cited schemes, tables and figures, corresponding to the topic; during the defence of an essay, a student does not read the text, answers confidently without mistakes; all the questions are answered.
	Good Corresponds to points: 85-89 80-84 75-79 70-74	A student prepares an essay on a topic by an appointed time, independently, accurately, with the volume of at least 10 pages of an A4 format with a single line spacing and a font size of 14, using at least 5 information sources; in the essay, there is a detailed plan, cited schemes, tables and figures, corresponding to the topic; during the defence of an essay, a student does not read the text, answers confidently without mistakes; while answering questions, a student makes

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MEDISINA AKADEMIASY SOUTH KAZAKHSTAN MEDICAL ACADEMY

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		unprincipled mistakes.
	Satisfactorily Corresponds to points: 65-69 60-64 50-54	A student prepares an essay on a topic by an appointed time, independently, but inaccurately, with a volume of at least 10 pages of an A4 format with a single line spacing and a font size of 14, using less than 5 information sources and having an undeveloped plan; during a defence of an essay, a student reads the text, answers uncertainly, makes fundamental mistakes.
Preparation and Defense	of a Presentation	
Form of Control	Evaluation	Criteria for Evaluation
Preparation and Defense of a Presentation	Excellent Corresponds to points: 95-100 90-94	A student prepares a presentation on a topic by an appointed time, independently, accurately, with a minimum of 20 laconic and informative slides, using at least 5 information sources; a presentation contains a detailed plan, schemed, tables and figures corresponding to a topic; during a defence of a presentation, a student shows a profound knowledge of the subject, accurately answers all the questions asked.
	Good Corresponds to points: 85-89 80-84 75-79 70-74	A student prepares a presentation on a topic by an appointed time, independently, accurately, with a minimum of 20 laconic and informative slides, using at least 5 information sources; a presentation contains a detailed plan, schemes, tables and figures corresponding to a topic; during a defence of a presentation, a student shows a good knowledge of a subject; while answering questions, a student does not make principal mistakes.
	Satisfactorily Corresponds to points: 65-69 60-64 50-54	A student prepares a presentation on a topic by an appointed time, independently but inaccurately, with a minimum of 20 non-informative slides, using fewer than 5 information sources; a presentation contains an undeveloped plan, an insufficient number of schemes, tables and drawings corresponding to the topic; during a defence of a presentation, a student uncertainly answers questions, makes principal mistakes.
	Unsatisfactory Corresponds to points 25-49 0-24	A student does not prepare a presentation on a topic by an appointed time, or prepares it timely, but non-independently, inaccurately, with a volume of fewer than 20 non-informative slides, without indicating information sources; a

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			answering mistakes or	questions, a	contain a j a student m aswer question	akes gross	
FULL NA	AME of the stu	CHECK L	IST				
Criteria fo	er evaluating a	presentation in a multimedia form	nat				
No.				L	LVL		
		Criteria	excellent 90-100	good 70-89	satis 50-69	unsatis 49 -0	
1.	presentation	a title slide with a title, a plan, a sufficient number of of used printed and Internet	10	7.5	5	0	
2.	A content of topic and tas	f a presentation corresponds to a sks.	10	7.5	5	0	
3.	Slides are lo	ocated in a logical order.	10	7.5	5	0	
4.	The style of a material presentation (laconism, clear formulation, coherence).		10	7.5	5	0	
5.	Use of mode sufficient ex	ern information sources to stent.	10	7.5	5	0	
6.	An ability to conclusions	generalize a material with clear	10	7.5	5	0	
7.	Level of orionaterial.	entation in a presentation	10	7.5	5	0	
8.	Ability to co consistently	ommunicate clearly, competently,	10	7.5	5	0	
9.	•	efend own position and ability to uctively to criticism.	10	7.5	5	0	
10.	The quality clarity, etc.)	of design of the slides (colour,	10	7.5	5	0	
	Total		100	75	50	0	
		Teacher's signature					
		midterm control.		<b>Q.1</b> : 1 = 1	<u> </u>		
Form of	Control	Evaluation		Criteria for	Evaluation		

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Miderm in the form written interviews and MCQ testing	Excellent Corresponds to points: 95-100 90-94	During answering, a student does not make any mistakes or inaccuracies. A student orients in theories, concepts and branches of the studied discipline and gives them a critical evaluation, using the scientific achievements of other disciplines.  90-100% of correct answers by tests.
	Good Corresponds to points: 85-89 80-84 75-79 70-74	During answering, a student does not make gross mistakes, makes non-principle inaccuracies or principle mistakes corrected by a student self; a student manages to systematize a program material with the help of a teacher.  70-89% of correct answers by tests.
	Satisfactorily Corresponds to points: 65-69 60-64 50-54	During answering, a student makes inaccuracies and non-principle mistakes; the answer is limited only by the educational literature indicated by a teacher; a student experiences great difficulties in systematising the material.  50-69 of correct answers by tests.
	Unsatisfactory Corresponds to points 25-49 0-24	During answering, a student makes principle mistakes, does not work with the basic literature on a topic of a lesson; does not know how to use the scientific terminology of the discipline; answers with gross stylistic and logical mistakes. There are less than 50% of correct answers by tests.
Final control during i	ntermediate attestation	
Form of Control	Evaluation	Criteria for Evaluation
Objective structured practical examination (OSPE)	Excellent Corresponds to points: 95-100 90-94	A student correctly completes the randomly chosen tasks, shows a deep knowledge of the discipline
	Good Corresponds to points: 85-89 80-84 75-79 70-74	A student correctly completes the randomly chosen tasks, shows good knowledge of the discipline
	Satisfactorily Corresponds to points: 65-69 60-64 50-54	A student completes correctly the randomly chosen tasks, resorting to the help of a teacher, shows satisfactory knowledge of the discipline.
	Unsatisfactory	A student incorrectly completes or doesn't

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	Corresponds to points 0-49	complete the randomly chosen tasks at all, shows unsatisfactory knowledge of the discipline
MCQ testing	Excellent Corresponds to points: 95-100 90-94	A student fulfils correctly 90-100% of the MCQ tasks.
	Good Corresponds to points: 85-89 80-84 75-79 70-74	A student fulfils correctly 70-89% of the MCQ tasks.
	Satisfactorily Corresponds to points: 65-69 60-64 50-54	A student fulfils correctly 50-69% of the MCQ tasks.
	Unsatisfactory Corresponds to points 25-49 0-24	A student fulfils correctly less than 50% of the MCQ tasks.

Criteria for assessment of the tasks in online learning

Form of Control	Evaluation	Criteria for Evaluation
Practical work, solving case tasks, interpretation of the results of clinical and laboratory studies, discussion of the main points of the topic, performing MCQ tasks, preparing an essay, preparing and defending a presentation preparing and defending	Excellent Corresponds to points: 95-100 90-94	* A student prepares and demonstrates the performance of tasks placed in the module; 'Assignments' in Platonus (case tasks, presentation, essay and other material on the topic of the lesson (assessment criteria are indicated above) – 38-40%;  * A student answers the control questions logically, reasonably, competently – 18-20%;  * A student correctly completes the MCQ tasks (assessment criteria are indicated above) – 18-20%;  * A student asks the questions logically, competently – 8-10%;  * A student is active in the chat – 8-10%.
	Good Corresponds to points: 85-89 80-84 75-79 70-74	* A student prepares and demonstrates the performance of tasks placed in the module 'Assignment' in Platonus (case tasks, presentation, essay and other material on the topic of the lesson (assessment criteria are indicated above) – 35-38%;  * A student answered questions making minor mistakes – 10-18%;

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	* A student completes the MCQ tasks (assessment criteria are indicated above) -15-18%;  * A student makes inaccuracies in the formulation of questions, corrected them on his own - 5-8%;  * A student shows low activity in the chat - 5-7%.
Satisfactorily Corresponds to points: 65-69 60-64 50-54	* A student prepares and demonstrates the performance of tasks placed in the module 'Assignment' in Platonus (case tasks, presentation, essay and other material on the topic of the lesson (assessment criteria are indicated above) – 30-35%;  * A student answers the questions making principal mistakes – 5-10%;  * A student made mistakes when performing MCQ tasks (assessment criteria are indicated above) – 10-15%;  * The student makes principal inaccuracies in the formulation of questions – 3-5%;  * A student shows little activity in the chat – 2-4%.
Unsatisfactory Corresponds to points 25-49 0-24	* A student doesn't prepare and demonstrates no performance of the tasks placed in the module 'Assignment' in Platonus (case tasks, presentation, essay and other material on the topic of the lesson (evaluation criteria, see above) – 0-30%;  * A student answers incorrectly or doesn't answer the questions at all – 0-5%;  * A student makes a lot of principal mistakes when performing MCQ tasks (see the evaluation criteria above) – 0-10%;  * When formulating questions, a student makes principal mistakes or doesn't ask them at all – 0-3%;  * A student shows no activeness in the chat – 0-1%.

## 11. Learning resources

Electronic resources include but are not limited by: databases, animation simulators, professional blogs, websites, other reference materials (for example video, audio, digest)

#### Website of UKMA:

https://ukma.kz

Electronic sources:

- 1. Нормальная физиология [Электронный ресурс] : учебник / под ред. Б. И. Ткаченко. 3-е изд., испр. и доп. Электрон.текстовые дан. ( 53,1Мб).
- М.: ГЭОТАР Медиа, 2017. эл. опт.диск
- 2. Адам физиологиясы. Динамикалық сызбалар атласы [Электронный ресурс] : оқулық / К. В. Судаков [ж.б.] ; қазақ тіл. ауд. М. Қ. Қанқожа. -

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	Scopus https://www.scopus.com/ Sciencedirect
	Thomson Reuters «Web of Science» www.webofknowledge.com
	https://elibrary.ru/ Open Library https:// kitap.kz/
	https://online.zakon.kz/Medicine/ Scientific online library
	https://zan.kz/ru Paragraph
	Law (access in the reference and information sector)
	Student advisor <a href="http://www.studmedlib.ru/">http://www.studmedlib.ru/</a> Open University of Kazakhstan <a href="https://openu.kz/kz">https://openu.kz/kz</a>
	http://rmebrk.kz/
	Republican interuniversity electronic library
Electronic books:	Electronic database: UKMA repository http://lib.ukma.kz/repository/
	текстовые дан. ( 22,3 Мб) Түркістан : ОҚО, 2012 эл. опт. диск
	Медициналық мамандықтарға арналған Электрон.
	министрлігі; Техникалық және кәсіптік білім;
	[Электронный ресурс] : медициналықколледждерге арналған оқу құралы / ҚР денсаулық сақтау
	Физиология пәнінен электронды оқу құралы
	- M. : ГЭОТАР - Медиа, 2012 448 c.
	[Электронный ресурс] : учеб.пособие / А. Г. Камкин, И. С. Киселева Электрон.текстовые дан. (58,7 Мб).
	5. Камкин, А. Г. Атлас по физиологии. В 2 т. Т. 2
	- M.: ГЭОТАР - Медиа, 2010 408 с. эл. опт.диск
	[Электронный ресурс] : учеб.пособие / А. Г. Камкин, И. С. Киселева Электрон.текстовые дан. (58,4 Мб).
	4. Камкин, А. Г. Атлас по физиологии. В 2 т. Т. 1
	ГЭОТАР - Медиа, 2015 864 бет.эл. опт. диск
	оқулық / қаз.тіл. ауд. Ф. А. Миндубаева ; ред. К. В. Судаков Электрон.текстовые дан. (1,42Мб) М. :
	3. Қалыпты физиология [Электронный ресурс] :
	Электрон.текстовые дан. (105Мб) М. : ГЭОТАР - Медиа, 2017 464б. с.

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- 3. Физиология человека: учебник / Л. З. Тель [и др.]. Рек. Респ. центром инновационных технологий мед.образования и науки М-ва здравоохранения РК. -

Алматы: Эверо, 2012. -600 с.

#### supplementary:

- 1. Физиология человека: учебник / под ред. В. М. Покровского, Г. Ф. Коротько. 2-е изд., перераб. и доп; Рек. Департаментом образовательных мед.учр. и кадровой политики М-ва здравоохранения РФ. М.: Медицина, 2007. 656 с.
- 2. Миндубаева, Ф. А. Руководство к практическим занятиям по физиологии: учеб.- методическое пособие / Ф. А. Миндубаева, А. М. Евневич, Т. И. Крекешева. Алматы: Эверо, 2012. 194 с.
- 3. Ситуационные задачи по курсу нормальной физиологии: учебно-методическое пособие / В. К. Касымбеков [и др.]. Алматы: Эверо, 2016. 144 с.
- 4. Нормальная физиология: Практикум : учеб. пособие / под ред. К. В.

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- 2. Қалыпты физиология: оқулық / РФ БҒМ; ред. басқ. К. В. Судаков; қаз. тіліне ауд. және жауаптыред. Ф. А. Миндубаева. -; И. М. Сеченоватындағы Бірінші М
- 1. Қасымбеков, В. Қ. Қалыпты физиология бойынша ахуалдық есептер жиынтығы: оқуәдістемелік құрал / В. Қ. Қасымбеков, Р. Е. Нұргалиева, А. Т. Қалдыбаева. - Алматы : Эверо,

2016. - 152 бет. с.

- 2. Қасымбеков, В. Қ. Физиологиялық зерттеу әдістері: оку- әдістемелік құрал / В. Қ. Қасымбеков, Ф. К. Балмағанбетова, А. Т. Қалдыбаева. Алматы : Эверо, 2016. 176 бет. с.
- 3. Сәтбаева, Х. Қ. Адам физиологиясы: оқулық / Х. Қ. Сәтбаева, А. А. Өтепбергенов, Ж. Б.Нілдібаева. 2-ші бас. түзетілген және толықтырылған. Алматы : Эверо, 2010. 664бет. с.
- 4. Сайдахметова, А. С. Физиологиядантәжірибелік сабақтарға нұсқаулар: оқу құралы / А. С. Сайдахметова, С. О. Рахыжанова. Караганды : АҚНҰР, 2016. 260 бет. с.

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MEDICAL
ACADEMY
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АО «Южно-Казахстанская медицинская академия»

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- 5. Қалыпты физиология: оқулық / РФ БҒМ ; ред. басқ. К. В. Судаков; қаз. тіліне ауд. және жауаптыред. Ф. А. Миндубаева. ; И. М. Сеченоватындағы Бірінші МММУ ұсынған. М. : ГЭОТАР Медиа, 2015. 864 бет. + эл. опт. диск
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- 6. Миндубаева, Ф. А. Физиология пәнінен практикалық сабақтарға арналған нұсқау: окуәдістемелік құрал / Ф. А. Миндубаева, А. Х. Абушахманова, А. Х. Шандаулов. Алматы : Эверо, 2012. 186 бет. с.

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#### supplementary:

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12.	Discipline Policy
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Requirements for a student, attendance, behavior, grading policies, penalties, motivation, etc.

#### A student must:

- keep medical ethics and deontology;
- do not smoke at the academy;
- keep the department clean;
- not to spoil furniture in classrooms;
- take good care of textbooks;
- keep the appearance relevant to a medical university student;
- comply with safety regulations;
- during quarantine, wear medical masks and observe the sanitary and epidemiological regime;
- do not miss classes without a valid reason;
- to fix missed classes due to a valid reason on time, but only with the dean's office permission and at a time specified by the teacher;
- not be late for classes;
- to have the necessary documentation in the classroom: a syllabus, methodological recommendations for classes, lectures, a notebook and a textbook;
- prepare conscientiously for classes;
- be active during classes;
- do not engage in extraneous activities during class: do not talk, do not smoke, do not chew chewing gum, do not eat, do not use the phone, do not listen to music, do not read newspapers and magazines, do not prepare for another discipline classes;
- keep quiet and order during breaks;
- on time submit SIW (in electronic form) according to a schedule, with checking of written works for plagiarism.

#### Requirements of the department to students in the process of distant learning:

- to perform individual and group assignments in the 'Assignment' module of the Platonus according to the schedule of lectures, practical classes and SIW;
- to participate online at lectures, practical and SIW classes through Zoom and Webex platforms;
- to be aware of the deadlines for assignments in the 'Assignment' module of the Platonus.

## In the case of violations of the rules, the following penalties are applied to students:

- for each missing lecture without a valid reason, 1 point is deducted from a student's midterm examination mark (penalty scores);
- Per 1 absence at SIW class without a valid reason, 2 points are deducted from the average of SIW marks;
- in the case of late submission of SIW without a valid reason (later than the scheduled week), the SIW is not accepted;
- in case of a single violation of the discipline policy, a warning is given to the student;
- in case of systematic violations of discipline policy, information on student behaviour is delivered to the dean's office of the faculty;
- in case of distant learning, if a student submits a task to Platonus later than scheduled terms or doesn't submit it at all for no valid reason, the student gets '0' in the e-gradebook for according week.

#### **Criteria for not admitting to the final exam:**

A student who has received an unsatisfactory mark for one of the types of controls (midterm control 1, midterm control 2, an average mark of current control) is not allowed to take the final exam.

13.	Academic policy based on the moral and ethical values of the academy		
	www.ukma.kz Regulations and Rules of SKMA. Academic policy.		
	П.4 Student Code of Honor		
	Π.10. Organization of the educational process		
	П.12. Grading Policy		

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Final control. Students who have fully mastered the discipline program and who have gained an admission rating are allowed to the exam.

The final score (FC) is calculated automatically based on the average scores of the current control (CC: practical classes, SIWT, penalty scores), midterm examinations (avMEs, penalty scores) and the final examination (FE):

avMEs = (ME1 + ME2) / 2

**avCC** = mean of current grades taking into account the average score for practical classes, SIWT and penalty points.

**Access rating (60%)** = 0.2\*avMEs + 0.4\*avCC

Final grade (100%) = 0.2\*avMEs + 0.4\*avCC + 0.4\*FE

or

Final grade (100%) = 0.6\*Access Rating + 0.4\*FE

avME – average score of midterm examinations

avCC- average scores of the current control

FE – final examination

ME 1 – midterm examination 1

ME 2 – midterm examination 2

14. Approval and rev	Approval and revision			
Date of approval at the department 06.05.2022	Protocol No _10a_	Full name of the head of the department Zhakipbekova G.S.	Signature	
Date of approval by CEP: 20.06.2022	Protocol Ne_10_	Full name of the chairwoman of the CEP Dossybaveva G N	Signature	
Date of revision at the department	Protocol No	Full name of the head of the department Zhakipbekova G.S.	Signature	
Date of revision by CEP	Protocol No	Full name of the chairwoman of the CEP Dossybayeva G.N.	Signature	