Syllabus

Working curriculum of the discipline
«The nervous system, sensory organs, vision, hearing, and balance are normal»
Educational program: 6B10115 «Medicine»

1.	General information about the discipline		
1.1	**Discipline code:** NSSOVHBN 2209	1.6	**Academic year:** 2025-2026
1.2	The name of the discipline: "The nervous system, sensory organs, vision, hearing, and balance are normal."	1.7	**Year:** 2
1.3	**Prerequisites:** Molecular Biology and Medical Genetics	1.8	**Term:** 3
1.4	**Post-requisites:** general pathology, nervous system, sensory organs of vision, hearing and balance in pathology	1.9	**Amount of credits(ECTS)**: 4/120
1.5	**Cycle:** BD	1.10	**Component**: UC

2.	Description of the discipline
	Formation of fundamental knowledge about anatomical, physiological and histological features of the nervous system and sensory organs, application of this knowledge in biomedical and clinical sciences. The structure and membranes of the brain and spinal cord. Formation of plexuses of spinal nerves. Topography of cranial nerves. Ventricles of the brain, circulation of cerebrospinal fluid. The pathways of the brain and spinal cord. The autonomic nervous system. The structure of the senses, vision, hearing, and balance.

3.	The form of the summative assessment		
3.1	☑ Testing	3.5	Coursework
3.2	Written	3.6	Essay
3.3	Oral	3.7	Project
3.4	☑ Assessment of practical skills	3.8	Other (specify)

4.	Purpose of the discipline
	Formation of a systemic understanding among students of the normal structure, functions, and histological organization of the nervous system and sensory organs (vision, hearing, and balance) based on the integration of data from anatomy, physiology, and histology, as a fundamental foundation for the subsequent study of clinical disciplines and for understanding the mechanisms of regulation of vital functions of the body under normal conditions.

5.	Final learning outcomes (LO discipline)
LO1	**Knowledge and understanding:** Demonstrates knowledge of the anatomical structure, physiological processes, and histologic features of the nervous system, sensory organs, vision, hearing, and equilibrium in the normal range.
LO 2	**Applying knowledge and understanding:** Applies knowledge of the anatomical, physiological, and histological structure of the nervous system and sensory organs (vision, hearing, and balance) to explain their normal functioning, establish structural and functional relationships, and substantiate the role of sensory systems in ensuring the holistic functioning of the body.
LO3	**Forming judgments:** Evaluates the relationship between the anatomical structure, physiological functions, and histological features of the structures of the central and peripheral nervous systems, organs of vision, hearing, and balance in order to form informed judgments about the mechanisms of sensory perception and motor coordination, and the importance of these structures for the normal functioning of the body.

LO4	**Communication skills:** uses medical terminology for a clear, correct and logical explanation of the anatomy and functions of the nervous system, organs of vision, hearing and balance in oral and written form, through the application of the rules of ethics, deontology and principles of inclusion when communicating with teachers, classmates, patients and their relatives, taking into account their different educational needs and communicative characteristics.
LO5	**Learning skills:** Plans and controls the process of self-study of the anatomical and physiological features of the nervous system and sensory organs using modern educational resources, and uses critical thinking to systematize and summarize knowledge in preparation for academic classes and exams.

5.1	**LO of discipline**	**LO of an educational program that are associated with the discipline's learning rating**
	LO 1 LO 2	LO 1 –Applies fundamental knowledge of biomedical, clinical, epidemiological, and social-behavioral sciences to practice.
	LO 3 LO 5	LO 2 -Provides patient-centered care in biomedical, clinical, epidemiological sciences aimed at diagnosis, treatment and prevention of the most common diseases.
	LO 4	LO 4 – Communicates effectively with patients, their families and health care providers in an ethical, deontological and inclusive manner, resulting in effective information sharing and collaboration.

6.	**Detailed information about the discipline**
6.1	Venue – Shymkent, Al-Farabi Square 1, Main Educational Building, Basement Floor; Al-Farabi Square 3, Educational Building No. 2, 4th–5th Floors, e-mail: anatomia.2012@mail.ru

6.2	**Amount of hours**	Lectures	Practical lessons .	Laboratory lessons	SIWT	SIW
		8	**32**	**-**	**12**	**68**

		1	2	3	4	5	6	7	8	9	10	
Anatomy	Lecture	1			1			1	1			**4**
	Practical class		2		3	3	3		2		3	**16**
	SIWT/SIW		1/7				1/7	2/7 **MT -1**		2/7		**6/28**
Physiology	Lecture			1			1					**2**
	Practical class	2	2					2		2		**8**
	SIWT/SIW				1/7						2/7 MT-2	**3/14**
Histology	Lecture		1			1						**2**
	Practical class	2		2					2	2		**8**
	SIWT/SIW			1/5		1/5			1/4			**3/14**
Preparation and conduction of the interim assessment	**12**											

7.	**Information about teachers**		
№	**Full name**	**Degrees and positions**	**Email address**
1.	Tanabayev Baymakhan Dilbarkhanovich	Head of Department , Ph.D. , acting professor	b.tanabayev@mail.ru
2.	Turekulova Akzharkyn Kenesovna	Senior. teacher, master	jarkin-74@mail.ru
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6.	Usipbek Dulatbek Bakhtiyarovich	teacher	dulatbekkz@gmail.com
7.	Zhakipbekova Galiya Saparovna	Candidate of Biological Sciences, Acting Professor	Galiya_074@mail.ru
8.	Satybaldieva Nazgul Mutalkhanovna	Senior. teacher, master	n_a_z_i_92@mail.ru
9.	Izbasarova Madina Seisenalievna	Senior. teacher	namuri12@mail.ru
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11.	Adilkhanova R.A.	teacher	
12.	Sisabekov Kasymkhan Ermekbayevich	Professor, d.m.s.	sisabekov47@mail.ru
13.	Seidaly Nurakhovich Zhumashev	Acting professor, d.m.s.	sult_med@mail.ru
14.	Toymbetova Karlygash Abibullayevna	Senior. teacher	tojmbetova71@mail.ru
15.	Edige Aidana Zhandosovna	Master's degree, senior lecturer	a.edige93@mail.ru
16.	Sartayeva Ulzhalgas Spandiyarovna	Master's degree, senior lecturer	sartaeva.ulzhalgas@mail.ru

8. The thematic plan of the lecture

The form of the lesson		The name of the topic	Brief summary	LO of the discipline	Amount of hours	Methods/ Technology of learning	Forms and methods of assessment
1	Anatomy. Lecture 1.	The general concept of the nervous system. Principles of the nervous system organization. The structure of the spinal cord. Simple and complex reflex arcs. Spinal nerves.	The general concept of the central nervous system. Development of the human nervous system. The spinal cord. Gray matter. A white substance. The membranes of the spinal cord. Reflex arc. Branches of spinal nerves.	LO1 LO2 LO3	1	Introductory	Feedback (control questions)
2	Histology. Lecture 1.	Histology of the nervous system.	Understanding the structure, development, and functional significance of peripheral nerve ganglia and nerve trunks, spinal cord, brain, and cerebellum.	LO1 LO2 LO3	1	Overview	Answers to control questions
3	Physiology Lecture 1.	General and private physiology of the central nervous system. The physiology of the ANS.	General characteristics of the central nervous system. Physiology of the spinal cord, medulla oblongata, posterior, middle, intermediate brain and cerebral cortex. Vegetative innervation.	LO1 LO2 LO3	1	Overview	Answers to control questions
4	*Anatomy. Lecture 2*	A general overview of the brain. The structure of the cerebral cortex. The membranes of the brain. Cranial nerves.	The brain. Divisions and membranes of the brain. The nuclei and ventricles of the brain. Topography of cranial nerves.	LO1 LO2 LO3	1	Overview	Feedback (control questions)
5	Histology. Lecture 2.	Histology of sensory organs.	An idea of the structure, development and functional significance of the receptor and supporting cells of the sensory organs.	LO1 LO2 LO3	1	Overview	Answers for control questions

6	Physiology Lecture 3.	The general physiology of analyzers.	Functions of visual, auditory, vestibular, gustatory, olfactory and skin analyzers.	LO1 LO2 LO3	1	Overview	Answers for control questions
7	*Anatomy. Lecture 3*	Organs of sight and smell. The pathways of the sensory organs.	The eyeball, the shell of the eyeball. The inner core of the eye. Auxiliary organs of the eye. The lacrimal apparatus. Features of the olfactory organ structure. The pathways of the sensory organs.	LO1 LO2 LO3	1	Overview	Feedback (control questions)
8	*Anatomy. Lecture 4*	Organs of hearing, balance, and taste. The pathways of the sensory organs.	The outer ear. The middle ear. The inner ear. Structural features of the organ of taste. The pathways of the sensory organs.	LO1 LO2 LO3	1	Overview	Feedback (control questions)
					8		
The thematic plan of the practical lesson							
1-day	Physiology Practical lesson 1.	General physiology of the central nervous system. Physiology of the autonomic nervous system.	General characteristics of the central nervous system. The neuron. The synapse. General concepts of reflex and reflex arc. The nervous center and its properties. Inhibition in the central nervous system. The value of vegetative innervation. Vegetative reflexes.	LO1 LO2 LO3 LO4	2	discussion of the main topics, completion of practical work and test assignments	Oral survey, assessment of the performance of practical work, assessment of the performance of test tasks, assessment of the solution of situational tasks
	Histology. Practical lesson 1.	Nerves. Nerve nodes. The spinal cord.	Morphofunctional characteristics. Structural features of sensitive nodes. Peripheral nerves. Spinal cord, gray and white matter. The concept of the reflex arc.	LO1 LO2 LO3 LO4	2	filling out a checklist of histological specimens and microphotographs	Practical lesson evaluation checklist.

2-day	Anatomy. Practical lesson 1.	The structure of the spinal cord. The membranes of the spinal cord. Formation of spinal nerves, their topography and areas of innervation.	The structure of the spinal cord. Gray matter. A white substance. Reflex arc. Branches of spinal nerves. Formation of plexuses (cervical, shoulder, lumbar and sacral), topography, branches and areas of innervation.	LO1 LO2 LO3 LO4	2	work with anatomical specimens, a torso model, anatomical casts, charts, panels, posters, on the interactive 'Pirogov' display and/or solving situational tasks	oral survey, assessment sheet for solving situational problems.
	Physiology Practical lesson 2.	Specific physiology of the central nervous system. I	The spinal cord. The medulla oblongata. The pathways of the spinal cord and brain. The midbrain.	LO1 LO2 LO3 LO4	2	discussion of the main topics, completion of practical work and test assignments	Oral survey, assessment of the performance of test tasks, assessment of the solution of situational tasks
3-day	Histology. Practical lesson 2.	The brain. The cerebellum.	Features of the brain stem structure. The cerebellar cortex. Cyto- and myeloachitectonics of the cerebral cortex. Types of organization of the cerebral cortex. Neuroglia of the cerebellum and cerebral cortex. The blood-brain barrier.	LO1 LO2 LO3 LO4	2	filling out a checklist of histological specimens and microphotographs	Practical lesson evaluation checklist.
4-day	Anatomy. Practical lesson 2.	A general overview of the brain. The membranes of the brain.	A general overview of the brain and its departments. Topography of the roots of cranial nerves at the base of the brain. The membranes of the brain. Sinuses of the dura mater.	LO1 LO2 LO3 LO4	3	work with anatomical specimens, a torso model, anatomical casts, charts, panels, posters, on the interactive 'Pirogov' display and/or solving situational tasks	oral survey, assessment sheet for completing test tasks
5-day	Anatomy. Practical lesson 3	Rhomboid brain: structure and functions.	Medulla oblongata, bridge, rhomboid fossa, cerebellum, fourth ventricle: structure and functions.	LO1 LO2 LO3 LO4	3	work with anatomical specimens, a torso model, anatomical casts, charts, panels, posters, on the interactive 'Pirogov' display and/or solving situational tasks	oral survey, assessment sheet for completing test tasks

6-day	Anatomy. Practical lesson 4	Midbrain and diencephalon, Telencephalon: structure and functions.	Midbrain, cerebral aqueduct: structure and functions. Diencephalon, third ventricle. Telencephalon: structure and functions. Cerebral hemispheres. Corpus callosum, fornix, anterior cerebral commissure. Lateral ventricles. Basal nuclei. Circulation of cerebrospinal fluid.	LO1 LO2 LO3 LO4	3	work with anatomical specimens, a torso model, anatomical casts, charts, panels, posters, on the interactive 'Pirogov' display and/or solving situational tasks	oral survey, assessment sheet for completing test tasks
7-day	Physiology Practical lesson 3.	Specific physiology of the central nervous system. II	The reticular formation.The cerebellum is an intermediate brain. Physiology of the cerebral hemispheres.	LO1 LO2 LO3 LO4	2	discussion of the main topics, completion of practical work and test assignments	Oral survey, assessment of the performance of test tasks, assessment of the solution of situational tasks
8-day	Anatomy. Practical lesson 5	The anatomy of the sensory organs. Organs of vision, smell and taste.	The eyeball, the shell of the eyeball. The inner core of the eye. Auxiliary organs of the eye. The lacrimal apparatus. The organ of smell. The organ of taste. The pathways of the visual, gustatory, and olfactory analyzers.	LO1 LO2 LO3 LO4	2	work with anatomical specimens, a torso model, anatomical casts, charts, panels, posters, on the interactive 'Pirogov' display and/or solving situational tasks	oral survey, assessment sheet for completing test tasks
	Histology. Practical lesson3.	Organs of sight and smell.	The structure of the membranes of the eyeball. Structural features of the dioptric apparatus of the eye. The cornea of the eye. The retina of the eye. Retinal neuroglia. Features of the olfactory organ structure.	LO1 LO2 LO3 LO4	2	filling out a checklist of histological specimens and microphotographs	Practical lesson evaluation checklist.
9-day	Histology. Practical lesson 4.	The organs of balance and gravity.	The structure of receptor spots. The structure of the ampullary scallop. The statokinetic analyzer.	LO1 LO2 LO3 LO4	2	filling out a checklist of histological specimens and microphotographs	Practical lesson evaluation checklist.
	Physiology Practical lesson 4.	The general physiology of analyzers.	Structural and functional features of the visual and auditory analyzers. Vestibular analyzer.	LO1 LO2 LO3 LO4	2	discussion of the main topics, completion of practical work and test assignments	Oral survey, assessment of practical work and completion of test tasks..

10-day	Anatomy Practical lesson 6	The organ of hearing and balance. Conducting pathways of auditory and statokinetic analyzers.	Vestibular-cochlear organ. The outer ear. The middle ear. The inner ear. Vestibular-cochlear organ. Conducting pathways of auditory and statokinetic analyzers.	LO1 LO2 LO3 LO4	3	work with anatomical specimens, a torso model, anatomical casts, charts, panels, posters, on the interactive 'Pirogov' display and/or solving situational tasks	oral survey, assessment sheet for completing test tasks
					32		
2-day	Anatomy SIWT/SIW 1 1. Name the main ganglia of the sympathetic division of the autonomic nervous system. 2. Explain the anatomical differences between the sympathetic and parasympathetic divisions of the autonomic nervous system. .	Autonomic nervous system	Structure and divisions of the autonomic nervous system. Sympathetic division of the autonomic nervous system. Sympathetic trunk and its ganglia. Parasympathetic division of the autonomic nervous system.	LO2 LO4 LO5	1/7	-preparation and defense of a presentation -completion of the scheme of course and innervation areas of nerves	Evaluation sheets for all forms of completed tasks.
3-day	Histology. SRWS/SR 1 (Self-Regulated Work of Students) Tasks for SIWS: 1. Differences between autonomic ganglia and sensory (spinal) ganglia.	Vegetative ganglia.	The structure of the sympathetic ganglia. The MIF of neurons. The structure of the parasympathetic ganglia. Dogel cells of type I, II, III.	LO2 LO4 LO5	1/5	defending the presentation of micro-preparations, microphotographs, compiling a glossary	Checklist for SIW assessment

4-day	Physiology SIWT/SIW 1. SIW Assignments: 1.List the main parts of the analyzer and briefly describe their functions. 2. Explain the physiological significance of the central part of the analyzer. 3. Apply knowledge of the analyzer's structure and function to interpret the pulse transmission pattern from the receptor to the cerebral cortex.	Physiology of the central nervous system. The physiological significance of analyzers.	Conducting pathways of the spinal cord. Spinal reflexes. Vegetative reflexes. The structure and functions of the limbic system. Features of the functioning of the left and right hemispheres. Memory of the mechanism of formation of short-term and long-term memory. Physiology of sleep. Olfactory analyzer. The taste analyzer. Viceroreception. Functions of thermo-, baro-, chemo-, and mechanoreceptors. Nociception (pain reception).	LO2 LO4 LO5	1/7	-preparation and defense of a presentation	Checklist for SIW assessment
5-day	Histology. SIWT/SIW 2 Assignments for SIWS: 1. Morphological differences between somatic and autonomic reflex arcs. 2. Work in small groups, prepare a presentation of micropreparations and microphotographs, compile a glossary.	Features of the organization of somatic and autonomic reflex arcs.	Composition of the somatic reflex arc. Structural features of the sympathetic and parasympathetic reflex arcs. The metasympathetic division of the autonomic nervous system.	LO2 LO4 LO5	1/5	defending the presentation of micro-preparations, microphotographs, compiling a glossary	Checklist for SIW assessment
6-day	Anatomy. SIWT/SIW 2 SIW Assignments: 1. List the nuclei and branches of the trigeminal, facial, glossopharyngeal, vagus, accessory, and sublingual nerves. 2. Use anatomical knowledge to draw up a diagram of the topography and innervation of the listed nerves on the head and neck.	Trigeminal nerve (V pair), facial nerve (VII pair), glossopharyngeal (IX pair), vagus (X pair), accessory (XI pair), hypoglossal nerves (XII pair).	Trigeminal nerve (V pair), facial nerve (VII pair), glossopharyngeal (IX pair), vagus (X pair), accessory (XI pair), hyoid nerves (XII pair): topography, nuclei, branches, connections with vegetative nodes, areas of innervation.	LO2 LO4 LO5	1/7	-preparation and defense of a presentation -completion of the scheme of course and innervation areas of nerves	Evaluation sheets for all forms of completed tasks.

7-day	Anatomy. SIWT/SIW 3 SIW assignment: Complete written assignments aimed at verifying knowledge, understanding and application of anatomical and histological features of the structure and functions of the spinal cord and brain.	Midterm - I.	Consolidation of the completed material on the topics of lectures, practical exercises, SIWT and SIW.	LO1 LO2 LO3 LO4 LO5	2/7	writing is the solution of integrated situational tasks.	assessment of the implementation of integrated situational tasks.
8-day	Histology. SIWT/SIW 3. SIW Assignments: 1. The mechanism of photoreception. Briefly describe the main steps.	The receptor cells of the visual organ and the mechanisms of photoreception.	Structural features of analyzers. Understanding of receptor cells and photoreception mechanisms.	LO2 LO4 LO5	1/4	defending the presentation of micro-preparations, microphotographs, compiling a glossary	Checklist for SIW assessment
9-day	Anatomy. SIWT/SIW 4 SIW Assignments: 1. List the main ascending and descending pathways of the central nervous system and indicate their anatomical localization. 2. Explain the functional differences between pyramidal and extrapyramidal pathways.	A general overview of the pathways of the nervous system.	Afferent and efferent pathways and their neurons.	LO2 LO4 LO5	2/7	-preparation and defense of a presentation -completion of the scheme of course and innervation areas of nerves	Evaluation sheets for all forms of completed tasks.
10-day	Physiology. SIWT/SIW 3. SIW assignment: Complete written assignments that test knowledge, understanding, and application of the morpho-functional features of the peripheral and central sections of the analyzers.	Midterm- II.	Consolidation of the completed material on the topics of lectures, practical exercises, SIWT and SIW.	LO1 LO2 LO3 LO4 LO5	2/7	Writing-solving integrated situational tasks	Checklist for the implementation of integrated situational tasks
	Preparation and conduct of the interim assessment				12		

9.	Teaching and assessment methods	
9.1	Lecture	Introductory, overview Assessment form: Feedback (control questions)
9.2	Practical lessons	Solving test and situational (clinical) tasks, discussion of the main topics, filling out a checklist of histological specimens and microphotographs. Assessment method: Oral questioning, solving test and situational (clinical) tasks, checklist for evaluating practical work
9.3	SIW/SIWT	Preparation of presentations of micropreparations and microphotographs, preparation of a presentation, drawing schemes of nerve courses and innervation areas, preparation of a glossary, solving situational (clinical) tasks. Assessment method: Evaluation sheets according to specific forms of the completed assignment
9.4	Midterm	Written – solving integrated situational tasks. Assessment method: Evaluation of the completion of integrated situational tasks

10 Evaluation criteria

10.1Criteria for evaluating the learning outcomes of a discipline

№ LO	Name of learning outcomes	Unsatisfactorily	Satisfactorily	Good	Excellent
LO1	Demonstrates knowledge of the anatomical structure, physiological processes and histological features of the nervous system, sensory organs are normal.	1. The student cannot name the basic structures of the nervous system and sensory organs. 2. Does not understand basic terms and classifications. 3. Unable to answer simple clarifying questions.	1. Names the main parts of the nervous system and sensory organs, but with inaccuracies. 2. Uses medical terms with errors. 3. Can give a short and partially correct answer to standard questions.	1. Confidently describes the structure and functions of the main departments of the central nervous system, organs of vision, hearing and balance. 2. Explains the physiological processes and histological structure in good detail. 3. Uses the relevant terminology correctly.	1. Explains in detail and accurately the anatomical structure, physiological functions and histological features of all key structures. 2. Demonstrates a deep understanding of the systemic relationships between structures. 3. Has a confident command of medical terminology. 4. Applies knowledge in the context of solving clinically oriented tasks and interdisciplinary issues.
LO2	Applies knowledge of the anatomical, physiological, and histological structure of the nervous system and sensory organs (vision, hearing, and balance) to explain their normal functioning, establish structural and functional relationships, and substantiate the role of sensory systems in ensuring the holistic functioning of the body.	1. Cannot explain the normal functioning of the nervous system and sensory organs. 2. It is difficult to establish links between the structure and function of structures. 3. There is no logic in explaining processes, it makes gross mistakes.	1. Explains the basic functions of the nervous system and sensory organs, but with inaccuracies. 2. Uses limited knowledge of anatomy, physiology and histology. 3. Has a general understanding of the role of sensory systems in life, but without a clear analysis.	1. Consistently and correctly explains the functions of the nervous system and sensory organs. 2. Establishes and substantiates key structural and functional relationships. 3. Confidently uses knowledge from anatomy, physiology and histology. 4. Demonstrates an	1. Deeply and comprehensively explains the normal functioning of the nervous system and sensory organs, including interstructural connections. 2. Is able to confidently and reasonably establish complex structural and functional relationships. 3. Integrates knowledge from related disciplines

					understanding of the contribution of sensory systems to the regulation and coordination of body functions.	to substantiate physiological processes. 4. Reasonably demonstrates the role of sensory systems in ensuring the holistic activity of the body, including in the clinical and physiological context.
	LO3	Evaluates the relationship between the anatomical structure, physiological functions, and histological features of the structures of the central and peripheral nervous systems, organs of vision, hearing, and balance to form informed judgments about the mechanisms of sensory perception and motor coordination.	1. Does not reveal the interrelationships between the structure, functions and microstructure of neuroanatomic and sensory systems. 2. Cannot explain the mechanisms of sensory perception and coordination of movements. 3. Judgments are unreasonable or erroneous, there are no logical connections.	1. Defines separate anatomical, functional and histological relationships, but not always consistently. 2. Partially explains the mechanisms of perception and coordination, admits inaccuracies. 3. The judgments are formulated, but not sufficiently substantiated.	1. Confidently establishes the relationship between the anatomical structure, physiology and histology of the structures of the central nervous system, sensory organs. 2. Explains the mechanisms of sensory perception and motor coordination with correct logic. 3. Judgments are well-founded, demonstrate a good understanding of functions. 4. Shows the ability to integrate knowledge from related disciplines.	1. Deeply and accurately analyzes and evaluates structural, functional and histological relationships. 2. Reasonably formulates judgments about the mechanisms of sensory perception and coordination of movements. 3. Shows a holistic understanding of the role of sensory structures in maintaining the normal functioning of the body. 4. Freely integrates knowledge from anatomy, physiology, histology and clinic to explain complex processes.
	LO4	Uses medical terminology for a clear, correct and logical explanation of the anatomy and functions of the nervous system, organs of vision, hearing and balance in oral and written form, through the application of the rules of ethics, deontology and principles of inclusion when communicating with teachers, classmates, patients and their relatives, taking	1. Does not use or distort medical terminology when explaining structure and functions. 2. Demonstrates unstructured speech, makes logical mistakes. 3. Does not comply with the norms of professional communication, does not take into account the principles of ethics,	1. Uses basic medical terminology, but allows for some inaccuracies. 2. Able to explain the basic functions and structure, but not always consistently and clearly. 3. Partially adheres to the norms of ethics and deontology, rarely demonstrates an inclusive approach.	1. Uses medical terminology accurately and appropriately in oral and written speech. 2. Explains anatomical and functional features logically, correctly and consistently. 3. Adheres to the norms of professional ethical communication, demonstrates	1. Freely and confidently uses professional medical terminology in various forms of communication. 2. Builds structured, logically verified explanations, taking into account anatomical and functional aspects. 3. Consistently applies the norms of ethics and deontology, demonstrates a high culture of

		into account their different educational needs and communicative characteristics.	deontology and inclusion.		respect and tact. 4. Takes into account the individual characteristics of the interlocutors, applies elements of inclusive interaction.	communication. 4. Actively uses an inclusive approach, adapting the style and form of communication to the educational and communicative needs of various participants.
	LO5	Plans and controls the process of self-study of the anatomical and physiological features of the nervous system and sensory organs using modern educational resources, and also uses critical thinking to systematize and summarize knowledge in preparation for academic classes and exams.	1. Does not plan the learning process, does not know how to allocate time and resources. 2. Does not use modern educational platforms, materials and tools. 3. There are no signs of analysis, systematization and generalization of information. 4. Preparation for classes and exams is chaotic and superficial.	1. Partially plans educational activities, but does not always meet deadlines or priorities. 2. Uses some educational resources, but not regularly. 3. Demonstrates the initial skills of critical thinking (for example, comparing and selecting information), but without consistency. 4. Preparation for classes is limited to memorization, without deep analysis.	1. Effectively plans and independently organizes the process of studying the topic. 2. Actively uses modern educational resources (video lectures, interactive platforms, electronic textbooks, etc.). 3. Applies critical thinking to analyze, systematize and summarize information. 4. Demonstrates a conscious approach to preparation: highlights the main thing, draws conclusions, establishes connections.	1. Thoughtfully plans and flexibly adapts the learning process depending on goals and deadlines. 2. Skillfully selects and combines modern resources, including interdisciplinary and English-language sources. 3. Actively and argumentatively applies critical thinking in information processing: analyzes, compares, interprets, draws conclusions. 4. Shows a high level of independence, motivation and the ability to learn throughout life (lifelong learning).
10.2 Assessment methods and criteria						
Checklist for practical training:						

Checklist for evaluating the oral response

Evaluation	Score	Evaluation criteria
Excellent	95-100	Complete and accurate reproduction of knowledge, deep understanding of interrelationships, confident use of terminology, integration with related disciplines and clinic, error-free.
	90-94	Almost complete reproduction, some minor inaccuracies, good application of knowledge, logical speech, uncritical flaws.
Good	85-89	Knowledge is generally accurate, 1-2 factual inaccuracies, logical thinking, confident but not in-depth answers.
	80-84	The material has been learned, but the explanations are superficial, mistakes are made, and integration is difficult.
	75-79	Knowledge is at a satisfactory level, there are systemic but not critical errors, and support is required.
	70-74	Fragmentary learning, missing key points, broken logic, low activity.
Satisfactorily	65-69	There is a general understanding, but significant mistakes are made; the logic is weak, and constant assistance from the instructor is required.
	60-64	Fragmentary or distorted knowledge, unable to explain connections, and lacking practical skills.
	50-59	Gross, systematic mistakes, poor understanding, incoherent answers, lack of independence.
Unsatisfactorily	0-49	Lack of basic knowledge, disorientation in all tasks, blunders, refusal to participate.

Checklist for evaluating the performance of test tasks (testing) - assessed using a multi-point grading system

Evaluation	Score	Evaluation criteria
Excellent	95-100	100-95% of the total tests were completed correctly; there were no errors; complete knowledge was demonstrated.
	90-94	There were 94-90% correct answers from the total number of tests; 1-2 minor errors were made that did not affect the result.
Good	85-89	89-85% of the correct answers from the total number of tests; individual errors that do not interfere with the general understanding of the material.
	80-84	84-80% of the total number of tests are correct; 2-3 errors in details, terminology is not always used correctly.
	75-79	79-75% of the total number of tests were correct; minor system errors were made, and questions were partially misunderstood.
	70-74	Correct answers are 74-70% of the total number of tests; logical errors, superficial knowledge.
Satisfactorily	65-69	69-65% of correct answers from the total number of tests; significant number of errors; unstable understanding of topics.
	60-64	64-60% of the total number of tests is correct; there are gaps in basic concepts and terms.
	50-59	59-50% of correct answers from the total number of tests; frequent guessing, superficial knowledge, uncertainty.
Unsatisfactorily	0-49	Less than 50% of the correct answers from the total number of tests; the errors are gross and systematic, and there is no knowledge of the topics.

Checklist for solving situational (clinical) problems

Evaluation	Score	Evaluation criteria
Excellent	95-100	The student fully and accurately determined the clinical situation, applied relevant

		knowledge, and logically justified the decision. There are no errors.
	90-94	An almost complete understanding of the situation, a logical explanation, minor inaccuracies, the general clinical picture is recognized.
Good	85-89	The situation has been recognized, and there are some inaccuracies in the reasoning or choice of a solution, but the general direction is correct.
	80-84	The analysis was performed with minor logical errors, but the main elements were taken into account.
	75-79	There are errors in logic or interpretation, but the understanding of key concepts is demonstrated.
	70-74	A partially correct decision, there are gaps in the analysis, and the decision is insufficiently substantiated.
Satisfactorily	65-69	The situation is partially understood, there are significant gaps in logic, and the solution is fragmentary.
	60-64	There are significant logical errors, insufficient application of knowledge, and refinement is required.
	50-59	The decision is given, but without justification, the clinical essence is not disclosed.
Unsatisfactorily	0-49	The situation is not recognized, the solution is missing or incorrect. There is a lack of logic and application of knowledge.

Checklist for evaluating a practical lesson in histology

Evaluation criteria	Level			
	Excellent	Good	Satisfactorily	Unsatisfactorily
Answers the questions of the individual Quizizz test	40	28	20	0
Answers oral survey questions (small groups)	20	14	10	0
Fills in tables	20	14	10	0
Performs situational tasks	20	14	10	0
Total:	100	70	50	0

Checklist for practical work, discussion of research results		
Evaluation	Score	Evaluation criteria
Excellent	95-100	The work was completed completely, the methodology was followed, the results were accurate, the explanation was logical, and active participation in the discussion.
	90-94	The work is almost error-free, minor deviations do not affect the overall result, and the discussion is confident.
Good	85-89	The main part of the work has been completed, the discussion is adequate, but there are minor flaws in the methodology or explanation.
	80-84	The work was done with some errors, the discussion is incomplete, but the topic is clear.
	75-79	The results are partially correct, there are gaps in interpretation, and participation in the discussion is limited.
	70-74	There are significant inaccuracies, the logic of the explanation is broken, and the participation is passive.
Satisfactorily	65-69	The work is partially completed, the methodology is broken, the explanation is weak.
	60-64	The results are inconclusive, the teacher's help is required, and activity is low.
	50-59	The work is formally completed, the understanding of the topic is superficial.
Unsatisfactorily	0-49	The work is incomplete or completely incorrect, and there is no participation in the

		discussion.

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

Assessment sheet
Criteria for evaluating the execution of the scheme (nerve movements)

№	Criteria for evaluating steps	Level			
		Excellent 90-100	Good 70-89	Satisfactorily 50-69	Unsatisfactorily 0-49
1.	The student must correctly draw a diagram of the nerve movements.	18-20	14-17,8	10-13,8	0-9,8
2.	The student should give the full name of the nerves in Latin.	18-20	14-17,8	10-13,8	0-9,8
3	The student must correctly indicate the topography, projection of nerves	18-20	14-17,8	10-13,8	0-9,8
4.	Have to list all the branches of nerves	18-20	14-17,8	10-13,8	0-9,8
5.	The student must specify the areas of innervation.	18-20	14-17,8	10-13,8	0-9,8

Assessment sheet
Criteria for evaluating a multimedia presentation

№	Criteria	Level, score in points			
		Excellent 90-100	Good 70-89	Satisfactorily 50-69	Unsatisfactorily 0-49
1.	The presence 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.	The content of the presentation corresponds to the topic and the tasks set.	9-10	7-8,9	5-6,9	0-4,9
3.	The slides are arranged in a logical sequence.	9-10	7-8,9	5-6,9	0-4,9
4.	The style of presentation of the material (conciseness, clear wording, structure).	9-10	7-8,9	5-6,9	0-4,9
5.	The use of modern sources of information in sufficient quantity.	9-10	7-8,9	5-6,9	0-4,9
6.	The ability to summarize the material, to draw clear and precise conclusions.	9-10	7-8,9	5-6,9	0-4,9
7.	The level of orientation in the presentation material.	9-10	7-8,9	5-6,9	0-4,9
8.	The ability to report clearly, competently, 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 the slide design (colorfulness, visibility, etc.).	9-10	7-8,9	5-6,9	0-4,9

Checklist for evaluation of preparation of protection of histological micro-preparations and micrographs

Evaluation	Score	Evaluation criteria
Excellent	95-100	The micro-preparation and micrography are performed flawlessly, the structures are precisely defined, the explanation is deep, logical and independent.
	90-94	Minor technical flaws, good understanding of structures and functions, and competent use of terminology.

Good	85-89	The work is generally correct, but with 1-2 errors in structure or explanation, terminology is used with small errors.
	80-84	The structures are partially defined, the explanation is superficial, and the micrograph is flawed.
	75-79	There are errors in recognizing structures and explaining them, and the reasoning is weak.
	70-74	The student has partially completed the task, and the teacher's help and revision of the work are required.
Satisfactorily	65-69	The work is poorly done, the functions and structures are difficult to explain, and errors are observed.
	60-64	The assignment was completed with gross errors, the terms are confused, and understanding is limited.
	50-59	The micro-preparation and explanation are extremely weak, there is practically no logic and independence.
Unsatisfactorily	0-49	The task was not completed or performed incorrectly, there is a lack of knowledge, understanding and interest in the topic.

Glossary assessment checklist

Evaluation	Score	Evaluation criteria
Excellent	95-100	The glossary contains all the key terms, is correctly and scientifically accurate, the language is clear, and the structure is logical.
	90-94	All the basic terms are presented, there are minor stylistic flaws, and the design is neat.
Good	85-89	The terms are generally correct, with 1-2 errors in wording or incomplete definitions of concepts.
	80-84	Several terms are missing or poorly explained, and there are inaccuracies in the design.
	75-79	Several terms are missing or poorly explained, and there are inaccuracies in the design.
	70-74	There are not enough terms in the glossary, some definitions contain errors, and the logical structure is broken.
Satisfactorily	65-69	The terms are given partially, there are few definitions, and significant errors and repetitions are observed.
	60-64	The glossary is fragmentary, the definitions are inaccurate or missing, and the design is weak.
	50-59	A significant part of the terms are missing, there are gross errors, and the structure is broken.
Unsatisfactorily	0-49	The glossary is missing or completely inconsistent with the assignment, the terms are not defined, and the work has not been completed.

Checklist for evaluating SIW in histology

№	Evaluation criteria	Level			
		Excellent	Good	Satisfactorily	Unsatisfactorily
1	Assessment of the protection of histological micro-preparations	40	28	20	0
2	Evaluation of the protection of electronic micrographs	40	28	20	0
3	Assessment of glossary compilation	20	14	10	0
	Total:	100	70	50	0

Assessment sheet of the written survey for midterm
(Responses for each component are evaluated separately)

Оценка	Score	Evaluation criteria
Excellent	95-100	All questions are fully disclosed, logically, without errors; accurate anatomical and physiological terminology is used.
	90-94	Most of the answers are complete and correct, minor inaccuracies do not affect the overall meaning, and the structure of the answer has been preserved.
Good	85-89	The answers are generally correct, but there are 1-2 factual or terminological errors, the logic is mostly preserved.
	80-84	There are superficial explanations and 2-3 mistakes, the terms are not always used accurately.
	75-79	The answers are partially disclosed, there are logical gaps and difficulties in using medical concepts.
	70-74	Significant errors in 2-3 questions, incomplete explanations, broken thought sequence.
Satisfactorily	65-69	Some of the information is reproduced correctly, but there are many patterns, weak reasoning, and 3-4 errors.
	60-64	Knowledge is fragmentary, key concepts are not disclosed, 4 or more errors, everyday words are used.
	50-59	The answers are superficial, there are many gross errors, there is no connection between the questions, terminology is not applied.
Unsatisfactorily	0-49	Most of the answers are incorrect or missing, factual and logical errors, and the work does not reflect knowledge.

Checklist for intermediate certification: CPS (certification of practical skills).

	Stage steps/evaluation criteria		Score	Evaluation		
Anatomy	1step	Described the structure and topography of the organs		Completed 100%	Partially completed 50%	Not completed 0%
	2step	Showed the components of the organ, gave a schematic description of the pathways, the course of the cranial nerves	25	25	12,5	0
Physiology	1step	Explained the physiological processes in tissues, organs and systems	25	25	12,5	0
	2step	Schematically demonstrated the structures and physiological processes	12,5	12,5	6,25	0

Histology	1step	Determined the histological micropreparation/ micrography, wrote the coloring	12,5	12,5	6,25	0
	2step	Described a micropreparation/ micrography, wrote a function	12,5	12,5	6,25	0

Multi-global knowledge assessment system:			
Letter system assessment	The digital equivalent of points	Percentage content	Assessment according to the traditional system
A	4,0	95-100	Excellent
A -	3,67	90-94	
B +	3,33	85-89	Good
B	3,0	80-84	
B -	2,67	75-79	
C +	2,33	70-74	
C	2,0	65-69	Satisfactorily
C -	1,67	60-64	
D+	1,33	55-59	
D-	1,0	50-54	
FX	0,5	25-49	Unsatisfactorily

11.	**Educational resources**
Electronic resources	1. SKMA Electronic Library – https://e-lib.skma.edu.kz/genres 2. Republican Interuniversity Electronic Library (RIEL) – http://rmebrk.kz/ 3. Digital Library “Aknurpress” – https://www.aknurpress.kz/ 4. Electronic Library “Epigraph” – http://www.elib.kz/ 5. Epigraph – Multimedia Textbook Portal – https://mbook.kz/ru/index/ 6. Electronic Library System IPR SMART – https://www.iprbookshop.ru/auth 7. Information and Legal System “Zan” – https://zan.kz/ru 8. Medline Ultimate EBSCO - https://research.ebsco.com/ 9. eBook Medical Collection EBSCO - https://research.ebsco.com/ 10. Scopus - https://www.scopus.com/

Electronic textbooks	1. Curtis, J. Anatomy & Physiology : A simplified guide to the structures and systems of the human body. / Jason Curtis.: Strength and Conditioning Course, 2020. https://rmebrk.kz/book/1178693 2. Frank H. Netter Netter Atlas of Human Anatomy. Classic Regional Approach. - Eight edition - PA: Elsevier, 2023 https://rmebrk.kz/book/1186042 3. Анатомия человека = Human Anatomy : учебное пособие / Е. С. Околокулак, Ф. Г. Гаджиева, С. А. Сидорович, Д. А. Волчкевич. — Минск : Вышэйшая школа, 2021. — 416 с. — ISBN 978-985-06-3304-0. — Текст : электронный // Цифровой образовательный ресурс IPR SMART : [сайт]. — URL: https://www.iprbookshop.ru/119959.html (дата обращения: 13.01.2025). — Режим доступа: для авторизир. пользователей 4. Klein, Robert M., Enders, George C. Anatomy, Histology, and Cell Biology : PreTest . . - Third Edition - Kansas City: Medical, 2007. – 638 https://rmebrk.kz/book/1169836 5. Kahle, W. et al. Color Atlas and Textbook of Human Anatomy : In 3 Volumes. Vol. 1: Locomotor System / W. Kahle, H. Leonhardt, W. Platzer. - 4th edition - Нью-Йорк, 1992. - 435 https://rmebrk.kz/book/1007683 6. Kahle, W. et al. Color Atlas and Textbook of Human Anatomy : In 3 Volumes. Vol. 2: Internal Organs / W. Kahle, H. Leonhardt, W. Platzer. - 4th edition - Нью-Йорк, 1992. – 372 https://rmebrk.kz/book/1007684 7. Kahle, W. et al. Color Atlas and Textbook of Human Anatomy : In 3 Volumes. Vol. 3: Nervous System and Sensory Organs / W. Kahle, H. Leonhardt, W. Platzer. - 4th edition - Нью-Йорк, 1992. – 376 https://rmebrk.kz/book/1007685 8. Susan Standring Gray - 42nd Edition - UK: Elsevier, 2020. – 2941 https://rmebrk.kz/book/1186064 9. Frank H. Netter Netter Atlas of Human Anatomy. Classic Regional Approach. - Eight edition - PA: Elsevier, 2023. – 1148 https://rmebrk.kz/book/1186042 10. Jonh T. Hansen Netter - 4th edition - PA: Elsevier, 2019. – 630 https://rmebrk.kz/book/1186043 11. Anatomy & Physiology : A simplified guide to the structures and systems of the human body. / Jason Curtis.: Strength and Conditioning Course, 2020. – 181 https://rmebrk.kz/book/1178693 12. Seyed Ali Khonsary Book Review: Atlas of Anatomy - Head, Neck, and Neuroanatomy. - Surgical neurology international 4/28/2020. - 85 с.// eBook Medical Collection EBSCO 13. Анатомия человека = Human Anatomy : учебное пособие / Е. С. Околокулак, Ф. Г. Гаджиева, С. А. Сидорович, Д. А. Волчкевич. — Минск : Вышэйшая школа, 2021. — 416 с. -: https://www.iprbookshop.ru/119959.html 14. K. Sembulingam, Prema Sembulingam Essentials of Medical Physiology. - Sixth Edition - India: Jaypee Brothers Medical Publishers, 2012. – 1097 https://rmebrk.kz/book/1186092 15. Бородулина, О.В. Цитология и гистология – Cytology and histology : Практикум. / Костанайский гос. педагогический университет им. У. Султангазина. - Костанай: КГПУ им.У.Султангазина, 2020. - 100 с. https://rmebrk.kz/book/1173375 16. Leslie P. Gartner Textbook of Histology. - Fourth edition - Philadelphia, PA: Elsevier, 2017. - 732https://rmebrk.kz/book/1186044 17. Зиматкин, С. М. Гистология, цитология и эмбриология. Атлас учебных препаратов = Histology, Cytology, Embryology. Atlas of practice preparations : учебное пособие / С. М. Зиматкин. — 2-е изд. — Минск : Вышэйшая школа, 2020. — 88 с. — ISBN 978-985-06-3202-9. — Текст : электронный // Цифровой образовательный ресурс IPR SMART : [сайт]. — URL: https://www.iprbookshop.ru/120132.html (дата обращения: 13.01.2025). — Режим доступа: для авторизир. пользователей 18. Neelam Vasudeva, Sabita Mishra, Textbook of Human Histology: With Color Atlas and Practical Guide. - Eighth Edition - India: Jaypee Brothers Medical Publishers, 2016. – 353 https://rmebrk.kz/book/1186062
Laboratory physical resources	Skeleton, bone sets, anatomical models, torso, electronic panels, 'Pirogov' anatomical panel. Microscopes, sets of micropreparations, atlas of microphotographs. Models, Sivtsev chart, Forster perimeter, electrocardiograph, sphygmomanometer, stethoscope, Sali hemometer. Simulators of the Practical Skills Center
Literature	**Anatomy** **Basics** 1. Chaurasia's, B. D. Human Anatomy [Text] : textbook in 4 vol. Vol. 2. Lower limb, Abdomen and pelvis / B. D. Chaurasia's. - 7th ed. - New Delhi : CBS Publishers & Distributors Pvt Ltd, 2016. - 498 p. Перевод заглавия: Анатомия человека 2. Chaurasia's, B. D. Human Anatomy [Text] : textbook in 4 vol. Vol. 2. Lower limb, Abdomen and pelvis / B. D. Chaurasia's. - 6 th ed. - New Delhi : CBS Publishers & Distributors Pvt Ltd, 2013. - 463 p.Перевод заглавия: Анатомия человека 3. Prives, M. Human Anatomy. Volume I [Текст] : учебник / M. Prives, N. Lusenkov, V. Bushkovich. - Moscow : Mir Publishers, 1989. - 608 p 1. Prives, M. Human Anatomy. Volume II [Текст] : учебник / M. Prives, N. Lusenkov, V. Bushkovich. - Moscow : Mir Publishers, 1989. - 440 p 2. Netter F. H.Atlas of Human Anatomy. Saunders / Elsevier, 2014 3. Drake R. L., Vogl A. W., Mitchell A. W. M. Gray's Anatomy for Students Churchill Livingstone, Elsevier, 2014 4. Morales R., Diego M. D., Sabahi M., Obrzut M., Najera E., Monterroso C.D., Bsat S., Adada B., Borghei R.H. A

primer to vascular anatomy of the brain: an overview on anterior compartment, Springer-Verlag Italia, 2024. // Scopus
5. Prasad S., Galetta S.L. Anatomy and physiology of the afferent visual system, Harvard Medical School, Boston, MA. - United States, 2011. // Scopus

Additional
1. Netter, Frank H. Atlas of human anatomy. textbook/Frank H. Netter. Philadelphia. Elsevier. 2014. 531 p.
2. Clinical Atlas of Human Anatomy : textbook / Peter H. Abrahams [et.al.]. - 8th ed. - Edinburgh : Elsevier, 2019. - 393 p.Перевод заглавия: Клинический атлас анатомии человека
3. Sperelakis, Nikolas. Essentials of Physiology [Текст] = Основы физиологии: монография / Nikolas Sperelakis. - Boston : New York : Toronto, London, 1996. - 722 с
4. Netter F. H.Atlas of Human Anatomy. Saunders / Elsevier, 2014
5. Usmle Step 1. Anatomy [Text] : lecturer notes / J. White [et. al.]. - New York : [s. n.], 2019. - 386 p. - (Kaplan Medical). - ISBN 978-1-5062-3646-9 : б/ц Перевод заглавия: Шаг 1. Анатомия

Physiology
Basics
1. Drake R. L., Vogl A. W., Mitchell A. W. M. Gray's Anatomy for Students Churchill Livingstone, Elsevier, 2014
2. Costanzo, Linda S. Physiology / Linda S. Costanzo. - 7th ed. - [S. l.] : Wolters Kluwer, 2019. - 325 p. - (BRS. Board Review Series). - ISBN 9781496367617 : Перевод заглавия: Физиология
3. Jain, A. K. Textbook of physiology. Vol.1Textbook/A. K. Jain Nev Delhi. Avichal publishing company. 2017. 596.
4. Jain, A. K. Textbook of physiology. Vol.2 Textbook/A. K. Jain Nev Delhi. Avichal publishing company. 2017. 524.
5. Jain, A. K. Textbook of physiology. Vol.2 Textbook/A. K. Jain Nev Delhi. Avichal publishing company. 2017. 524.
6. Hall John E. Guyton and Hall textbook of medical physiology : textbook / John E. Hall. - 12th ed. - Philadelphia : Elsevier, 2013. - 907 p
7. Hall John E. Guyton and Hall textbook of medical physiology : textbook / John E. Hall. - Philadelphia : Elsevier, 2016. - 927 p.
8. Netter F. H.Atlas of Human Anatomy. Saunders / Elsevier, 2014
Additional
1. Sperelakis, Nikolas. Essentials of Physiology [Текст] = Основы физиологии: монография / Nikolas Sperelakis. - Boston : New York : Toronto, London, 1996. - 722 с
2. Usmle Step 1. Physiology [Text] : lecturer notes / ed. Britt Wilson [et. al.]. - New York : [s. n.], 2019. - 425 p. - (Kaplan Medical). - ISBN 978-1-5062-3620-9 : б/ц Перевод заглавия: Шаг 1. Физиология

Histology
Basics
1. Gartner, Leslie P. Cell Biology and Histology [Text] / Leslie P. Gartner. - 8th ed. - [S. l.] : Wolters Kluwer, 2019. - 436 p. - (BRS. Board Review Series). - ISBN 978-1-496396358 : Перевод заглавия: Клеточная биология и гистология
2. Textbook of human histology [Text] : with colour atlas and practical guide / Inderbir Singh. - 6th ed. - New Delhi : Jaypee brothers medical publishers (P) LTD, 2011. - 386 p. Перевод заглавия: Учебник по гистологии человека
3. Inderbir Singh. Textbook of Human Histology.With Color Atlas and Practical Guide/8 th Edition.Jaypee Brothers Medical Publishers .2016.-302 p.Перевод Гистология человека
4. Dudek Ronald W. Embryology / Ronald W. Dudek. - 5th ed. - [s. l.] : Wolters Kluwer, 2014. - 158 p. Перевод заглавия: Эмбриология
Additional
1. Kuznetsov, S. L. Histology, cytology and embryology tests [Текст] = Тесты по гистологии, цитологии и эмбриологии : the English version was edited by / S. L. Kuznetsov. - M/ : Medical Informational Agency, 2004. - 136 p
2. Textbook of Human Histology. Inderbir Singh /Sixth Edition/Inderbir Singh 2010.-386 p.
Перевод Учебник по гистологии человека

12.	**Discipline Policy**

Requirements for Students:
1. Do not be late for classes.
2. Do not miss classes without a valid reason.

3. Be prepared for lectures, practical classes, and SIWT sessions.
4. Be active during practical classes.
5. Be able to work in a team.
6. Complete and submit SIW assignments on time, according to the schedule.
7. Do not engage in unrelated activities during classes.
8. Be tolerant, open-minded, and respectful toward classmates and instructors.
9. Follow ethical standards when working with anatomical specimens and human organs.
10. Treat the department's property with care.
11. Make up missed classes (with valid reasons) in a timely manner.
12. Follow safety regulations in the classroom.

During lectures / practical classes / SIWT sessions, students are prohibited from:

1. Using mobile devices or gadgets.
2. Leaving the classroom or clinical/production base without the instructor's permission.

Dress Code Requirements:

Students must:

Wear a clean, ironed medical coat and cap/head covering.

Maintain neat hair and short nails (for female students: bright makeup and nail polish are not allowed).

Disciplinary Measures:

For a single violation of the module policy, the student receives an oral warning from the instructor.

For repeated violations, the student must submit a written explanation addressed to the Head of Department.

For systematic violations, the Head of Department submits a report to the Dean's Office.

Additional Regulations:

A student who fails to appear for the midterm control without a valid reason, or receives an unsatisfactory grade for one of the control types (MT1, MT2, or current test), is not allowed to take the final exam.

A student who misses a midterm control for a valid reason may, upon returning to classes and with Dean's Office permission, receive a make-up sheet.

For each unexcused lecture absence, a penalty of 1.0 point is deducted from the midterm control grade.

For each unexcused SIWT absence, a penalty of 2.0 points is deducted from the SIWT grade.

Encouragement points are awarded according to the department's policy and added to the midterm control grade. For active participation in the Student Scientific Society (SSS) and seminars, students receive 5 to 10 additional points for each discipline.

If a student does not achieve 50% of the current rating (i.e., 30 points), they are not allowed to take the final exam.

13.	**Academic policy based on the moral and ethical values of the academy**
	Regulations and Rules of SKMA. Academic Policy of SKMA
	P.4 Student Code of Honor
	P.9 Organization of the educational process

14. Approval and Revision

Date of approval with the Library and Information Center	Protocol № 7 25.06.25	Head of the Library and information Center - Dadicheva R. I	
Date of Approval by the Departments	Protocol № 11 27.06.25	Department of Morphophysiology Tanabayev B.D	
Date of Approval by the Academic Committee of the Educational Program "Medicine"	Protocol № 6 27 06 25	Chairperson of the Academic Committee of the Educational Program "Medicine" Auyezkhankyzy D	
Date of Approval by the Departments	Protocol № 11 26.06.25	Department of Topographic Anatomy and Histology - Murzabova D.A	