

<p> ONTÜSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		<p> SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
<p> Department of Morphophysiology Department of Topographic Anatomy and Histology </p>		<p> 42/11-2025 52/11-2025 </p>
<p>Working curriculum of the discipline: The digestive and endocrine systems are normal</p>		<p>Page 1 from 24</p>


Syllabus

Working curriculum of the discipline **"The digestive and endocrine systems are normal"** **Educational program: 6B10115 "Medicine"**

1.	General information about the discipline		
1.1	Discipline code: DESN 2208	1.6	Academic year: 2025-2026
1.2	The name of the discipline: "The digestive and endocrine systems are normal"	1.7	Year: 2
1.3	Prerequisites: Molecular Biology and Medical genetics	1.8	Term: 3
1.4	Post-requirements: Digestive and endocrine systems in pathology	1.9	Amount of the credits (ECTS): 4/120
1.5	Cycle: BD	1.10	Component : UC
2.	The description of the discipline		
The formation of fundamental knowledge about the anatomical, physiological, and histological features of the digestive and endocrine systems in the normal state, with the aim of applying it in biomedical and clinical sciences, providing patient-centered care, and adhering to the principles of ethics and deontology for effective professional activities in the healthcare system.			
3.	The form of the summative assessment		
3.1	<input checked="" type="checkbox"/> Testing	3.5	Coursework
3.2	Written	3.6	Essay
3.3	Oral	3.7	Project
3.4	<input checked="" type="checkbox"/> Assessment of practical skills	3.8	Other (specify)
4.	Purpose of the discipline		
To provide students with a comprehensive understanding of the anatomical structure, physiological functions, and histological organization of the digestive and endocrine systems in the normal state, thereby laying the foundation for their role in the body's functioning and preparing them for clinical practice.			
5.	Final learning outcomes (LO disciplines)		
LO1	Demonstrates knowledge of the anatomical structure, physiological processes, and histological features of the digestive and endocrine systems normally.		
LO 2	He applies knowledge of the anatomical, physiological and histological structure of the digestive and endocrine systems to explain their normal functioning and establish structural and functional relationships reflecting the role of these systems in ensuring the holistic functioning of the body.		
LO3	Evaluates and forms informed judgments about the relationship between the structure and function of the digestive and endocrine systems based on knowledge of anatomy, physiology and histology, taking into account their importance for maintaining homeostasis and the holistic functioning of the body.		


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<p> Кафедра «Морфофизиологии» Кафедра «Топографической анатомии и гистологии» </p>		<p>42/11-2025</p> <p>52/11-2025</p>
<p>Рабочая учебная программа дисциплины: Пищеварительная и эндокринная системы в норме</p>		<p>Стр.3 из 24</p>

7.	Information about teachers		
№	Full name	Degrees and positions	Email address
1.	Tanabaev Baymakhan Dilbarkhanovich	Head of Department , Ph.D. , Professor	b.tanabayev@mail.ru
2.	Turekulova Akzharkyn Kenesovna	Senior. teacher, master	jarkin-74@mail.ru
3.	Dzhubanishbaeva Gaukhar Niyazkulovna	Senior. teacher, master	gaukharai_kairat@mail.ru
4.	Abduraimova Ulzhan Abdullayevna	teacher	ulzhan.abdullaevna@mail.ru
5.	Baktiyar Gulbanu Mazhitovna	teacher	banu.baktiyar.new@gmail.com
6.	Usipbek Dulatbek Bakhtiyarovich	teacher	dulatbek.kz@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 Seisenalieva	Senior. teacher	namuri12@mail.ru
10.	Sabit Akailym Yerlanovna	Senior. Teacher, master	sae.260996@mail.ru
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


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<p style="text-align: center;"> Department of Morphophysiology Department of Topographic Anatomy and Histology </p>		42/11-2025 52/11-2025
<p style="text-align: center;">Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		Page 4 frfom 24

8. The thematic plan


Day	Topic name	Brief summary	LO of the discipline	Amount of hours	Form and methods of the learning	Form and methods of assessment
1	Histology. Lecture 1. Histological structure of the digestive system.	Morphofunctional characteristics of the organs of the oral cavity, stomach and intestines. Structural features of the liver and pancreas.	LO 1 LO 2	1	Overview lecture.	Answers to control questions.
	Histology. Practical lesson 1. Organs of the oral cavity	Morphofunctional characteristics of the digestive system. Sources and course of embryonic development. Tonsils. Histophysiology of the esophagus.	LO 1 LO 2	2	filling out a checklist of histological specimens and microphotographs	Practical lesson evaluation checklist.
	Anatomy. Practical lesson 1. Oral cavity, tongue, palate, teeth, salivary glands, pharynx, esophagus: structure, topography, functions,	Practical lesson 1. Oral cavity, tongue, palate, teeth, salivary glands, pharynx, esophagus: structure, topography, functions	LO1 LO2 LO3 LO4 LO5	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 checklist; Checklist for solving situational problems; Checklist for completing test tasks
2	Anatomy. Lecture 1. Morphofunctional characteristics of the organs of the oral cavity, pharynx	Oral cavity, lips, hard palate, soft palate, teeth, tongue. Glands of the oral cavity. Pharynx	LO1 LO2	1	Introductory	Feedback (control questions)
	Physiology Practical lesson 1. Digestion in the mouth and stomach. Functions of the small and large intestines.	Gastrointestinal functions. The concept of digestion. Types of digestion. Physical and chemical processing of food in the mouth and stomach. The composition and functions of saliva. Enzymatic properties of gastric juice. Clinical and physiological research methods. The role of the small and large intestines in digestion.	LO1 LO2 LO3 LO4 LO5	2	discussion of the main issues of the topic, carrying out practical work, completing test tasks, solving situational tasks	Oral interview, assessment of the performance of practical work, assessment of the performance of test tasks, assessment of the solution of situational tasks

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<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 5 frfrom 24</p>


	<p>Histology SIWT/SIW 1.</p> <p>1. Large salivary glands. 2. Age-related features of pancreatic histology. 3.APUD system.</p> <p>SIW Assignment: 1. Features of the structure of the parotid, submandibular and sublingual glands. 2.Describe the histological organization of the acinus and excretory ducts. 3. Draw a diagram: "APUD cells in the human body"</p>	<p>The general outline of the structure of large and small salivary glands. Sources and course of pancreatic development. Features of the pancreas structure depending on age and nutrition Hormones and their importance in the body. The concept of target cells and hormone receptors. The structure and significance of the diffuse endocrine system.</p>	<p>LO 1 LO 2 LO4 LO5</p>	<p>1/7</p>	<p>defending the presentation of micro-preparations, microphotographs, compiling a glossary</p>	<p>Checklist for SIW assessment</p>
3	<p>Physiology. Lecture 1.</p> <p>General characteristics of the digestive system.</p>	<p>Physiological features of the digestive system.</p>	<p>LO1 LO2</p>	<p>1</p>	<p>Introductory</p>	<p>Feedback (control questions)</p>
	<p>Anatomy. Practical lesson 2. Stomach, small and large intestine: structure, topography, functions.</p>	<p>Stomach, small and large intestine: structure, topography, functions, blood supply, venous and lymphatic outflow, innervation.</p>	<p>LO1 LO2 LO3 LO4 LO5</p>	<p>3</p>	<p>work with anatomical specimens, a torso model, anatomical casts, charts, panels, posters, on the interactive 'Pirogov' display and/or solving situational tasks</p>	<p>Oral surveychecklist; Checklist for solving situational problems; Checklist for completing test tasks</p>
	<p>Histology. Practical lesson 2. Stomach.The small intestine.</p>	<p>The structure of the stomach. Cardiac, pyloric, and intrinsic glands of the stomach. The structure of the wall of the small intestine. Villi- crypts and their involvement in digestion.</p>	<p>LO 1 LO2 LO3 LO4 LO5</p>	<p>2</p>	<p>filling out a checklist of histological specimens and microphotographs</p>	<p>Practical lesson evaluation checklist.</p>

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<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 6 frfrom 24</p>


4	Anatomy. Lecture 2. Anatomy of the esophagus, stomach, small and large intestine	Esophagus, stomach, small intestine, and colon.	LO1 LO 2	1	Overview	Feedback (control questions)
	Anatomy. SIWT/SIW 1. Blood supply, venous and lymphatic outflow, innervation of the stomach, small and large intestines. SIW Assignment: 1. Name the arteries supplying blood to the stomach, small and large intestines. 2. Determine which neurovascular structures may be damaged during resection of a part of the colon.	Stomach, small and large intestine: blood supply, venous and lymphatic outflow, innervation.	LO1 LO2 LO3 LO4 LO5	1/6	Consultation on the most difficult issues of the curriculum in the implementation of SIW, work with educational literature, delivery of SIW in the form of: -Description of the anatomical preparation on the anatomical panel "Pirogov" -presentation	Assessment sheets for certain forms of completed assignments
	Physiology SIWT/SIW 1. Consultation on the implementation of SIW Food motivation. The physiological basis of hunger and satiety. Physiological norms of nutrition. The physiological foundations of rational nutrition. SIW Assignment: 1. List the main physiological mechanisms that regulate eating behavior, hunger and satiety, and also name the physiological norms of nutrition.	The concept of food motivation. Characteristics of hunger and satiety centers. Physiological norms of nutrition in different age groups. Characteristics of rational nutrition.	LO1 LO3 LO5	1/4	Preparation and explanation of the abstract and presentation	Checklist
	Histology Practical lesson 3. The large intestine. Liver. The pancreas.	Structural features of the colon wall. The liver lobule. Lymphatic follicles in the intestinal wall. Pancreatic acinus. Islands.	LO1 LO2 LO3 LO4 LO5	2	filling out a checklist of histological specimens and microphotographs	Practical lesson evaluation checklist.
5	Anatomy. Lecture 3.	The structure of the liver and gallbladder.	LO1 LO2	1	Overview	Feedback (control questions)

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<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 7 frfom 24</p>


	Structural features of the liver and pancreas. The peritoneum and its derivatives.	Topography of the liver. Ligaments of the liver. Segmental structure of the liver. The structure of the pancreas. The peritoneum and its derivatives. Floors of the peritoneal cavity.				
	Anatomy. Practical lesson 3. Liver, gallbladder, pancreas: structure, topography, functions.	The structure of the liver and gallbladder. Ligaments of the liver. Segmental structure of the liver. The structure of the pancreas. Blood supply, venous and lymphatic outflow, innervation.	LO1 LO2 LO3 LO4 LO5	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 checklist; Checklist for solving situational problems; Checklist for completing test tasks
	Physiology. Practical lesson 2. The role of the liver and pancreas in the digestive process.	The composition and properties of bile, pancreatic, intestinal juices and their role in the hydrolysis and absorption of nutrients.	LO1 LO2 LO3 LO4 LO5	2	discussion of the main topics, completion of practical work and test assignments	Oral interview, assessment of the performance of practical work, assessment of the performance of test tasks, assessment of the solution of situational tasks
6	Physiology Lecture 2. Hormonal regulation of physiological functions.	The endocrine glands (pituitary gland, thyroid gland, parathyroid glands, thymus gland, adrenal glands, pancreas, sex glands) and their hormones. Hypothalamic-pituitary-adrenal system.	LO1 LO2	1	Introductory	Feedback (control questions)
	Anatomy. Practical lesson 4. Abdominal cavity, pelvic cavity. Peritoneum, the course of the peritoneum. Floors of the peritoneum and its derivatives.	Abdominal cavity, pelvic cavity. Peritoneum, the course of the peritoneum. Floors of the peritoneum and its derivatives.	LO1 LO2 LO3 LO4 LO5	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 checklist; Checklist for solving situational problems; Checklist for completing test tasks
	Anatomy. SIWT/SIW 2. Features of the structure and function of the liver, gallbladder and pancreas in children SIW Assignment: 1. List the anatomical and physiological features of the structure of the liver, gallbladder and pancreas in	Anatomical and physiological features of the liver and pancreas in children. The development of the pancreas. Intrahepatic and extrahepatic bile ducts. Common bile duct, gallbladder.	LO1 LO4 LO5	1/6	Consultation on the most difficult issues of the curriculum in the implementation of SIW, work with educational literature, delivery of SIW in the form of: -Description of the anatomical preparation on the anatomical panel "Pirogov" -presentation	Assessment sheets for certain forms of completed assignments

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<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 8 frfrom 24</p>


	<p>newborns and young children.</p> <p>2. Analyze the clinical situation (for example, digestive disorders in a child) and relate the symptoms to the anatomical and functional features of the liver, gallbladder, or pancreas in childhood.</p>					
	<p>Physiology SIWT/SIW 2 Metabolism and energy.</p> <p>SIW Assignment: 1. List the main stages of metabolism and the forms of energy used in the human body.</p>	<p>The importance of metabolism and energy. Methods for determining the energy consumption of the body (direct and indirect calorimetry).</p>	<p>LO1 LO4 LO5</p>	<p>1/5</p>	<p>Preparation and explanation of the abstract and presentation</p>	<p>Checklist</p>
7	<p>Histology. Lecture 2. Histological structure of the endocrine system.</p>	<p>Morphofunctional characteristics of the endocrine system. Classification, sources, and course of development. Features of the hypothalamus structure. The structure of the pituitary gland. The epiphysis. The structure of the thyroid gland. The parathyroid glands. Adrenal glands, cortical and cerebral matter.</p>	<p>LO 1 LO 2</p>	<p>1</p>	<p>Overview lecture.</p>	<p>Answers to control questions.</p>
	<p>Histology. Practical lesson 4. The central organs of the endocrine system.</p>	<p>Morphofunctional characteristics of the endocrine system. Classification, sources, and course of development. Features of the hypothalamus structure. The structure of the pituitary gland. The epiphysis.</p>	<p>LO1 LO2 LO3 LO4 LO5</p>	<p>1</p>	<p>filling out a checklist of histological specimens and microphotographs</p>	<p>Practical lesson evaluation checklist.</p>
	<p>Anatomy. SIWT/SIW 3 Midterm 1.</p>	<p>Consolidation of the completed material on the topics of lectures, practical exercises, SIWT and SIW</p>	<p>LO1 LO2 LO3 LO4 LO5</p>	<p>2/6</p>	<p>Writing- solving integrated situational tasks</p>	<p>Checklist for the implementation of integrated situational tasks</p>

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<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 9 frfrom 24</p>


8	<p>Anatomy. Lecture 4. Morphofunctional characteristics of organs of the endocrine system, their role in regulating the activity of organs and systems of the body.</p>	<p>Branchiogenic group: Thyroid gland. The parathyroid glands. The thymus gland. Neurogenic group: Pituitary gland. The epiphysis. A group of the adrenal system. Mesodermal glands. Endodermal glands of the intestinal tube.</p>	<p>LO1 LO2</p>	1	Overview	Feedback (control questions)
	<p>Anatomy. Practical lesson 5. Endocrine glands of branchiogenic and neurogenic groups: structure, functions.</p>	<p>General anatomical and physiological properties of endocrine glands. Branchiogenic group: thyroid gland, parathyroid glands, thymus gland. Neurogenic group: pituitary gland and pineal gland (pineal gland). Blood supply, venous and lymphatic outflow, innervation.</p>	<p>LO1 LO2 LO3 LO4 LO5</p>	2	work with anatomical specimens, a torso model, anatomical casts, charts, panels, posters, on the interactive 'Pirogov' display and/or solving situational tasks	<p>Oral survey checklist; Checklist for solving situational problems; Checklist for completing test tasks</p>
	<p>Physiology. Practical lesson 3. General characteristics of the endocrine glands.</p>	<p>Structural and functional characteristics of the hypothalamic-pituitary system. Endocrine glands (hypothalamus, pituitary gland, thyroid gland, parathyroid glands, thymus gland, epiphysis) and their hormones. The mechanism of action of hormones.</p>	<p>LO1 LO2 LO3 LO4 LO5</p>	2	discussion of the main issues of the topic, carrying out practical work, completing test tasks, solving situational tasks	<p>Oral interview, assessment of the performance of practical work, assessment of the performance of test tasks, assessment of the solution of situational tasks</p>
9	<p>Anatomy. Practical lesson 6. Endocrine glands of adrenal, mesodermal and endodermal groups: structure, functions.</p>	<p>Adrenal glands: adrenal glands, paraganglia. Mesodermal glands: testicle, ovaries. Endodermal glands of the intestinal tube: pancreas. Blood supply, venous and lymphatic outflow, innervation.</p>	<p>LO1 LO2 LO3 LO4 LO5</p>	2	work with anatomical specimens, a torso model, anatomical casts, charts, panels, posters, on the interactive 'Pirogov' display and/or solving situational tasks	<p>Oral survey checklist; Checklist for solving situational problems; Checklist for completing test tasks</p>
	<p>Anatomy. SIWT/SIW 4 Malformations of the digestive tract. Task SIW: 1. Explain how a violation of embryonic development can lead to the formation of a</p>	<p>Malformations of the hard palate. Atresia of the esophagus, anus and rectum.</p>	<p>LO1 LO2 LO3</p>	1/5	<p>Consultation on the most difficult issues of the curriculum in the implementation of SIW, work with educational literature, delivery of SIW in the form of: -Description of the anatomical preparation on the anatomical panel "Pirogov"</p>	<p>Assessment sheets for certain forms of completed assignments</p>

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<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 10 from 24</p>


	specific defect of the digestive system.				-presentation	
	Physiology SIWT/SIW 3 Humoral regulation of functions. Age-related features. SIW Assignment: 1. List the main humoral factors (hormones, biologically active substances) involved in the regulation of body functions.	The endocrine glands (pituitary gland, thyroid gland, parathyroid glands, thymus gland) and their hormones. The mechanism of action of hormones. Age-related features.	LO1 LO4	1/5	Preparation and protection of the abstract and presentation	Checklist
	Histology. Practical lesson 5 Peripheral organs of the endocrine system.	The structure of the thyroid gland. The parathyroid glands. Adrenal glands, cortical and cerebral matter.	LO 1 LO2 LO3 LO4 LO5	1	filling out a checklist of histological specimens and microphotographs	Practical lesson evaluation checklist.
10	Anatomy. SIWT/SIW 5 Age-related features of the endocrine glands. Violation of the function of the endocrine glands. Task SIW: 1. Analyze a clinical case (for example, gigantism, cretinism, thymus involution) and indicate the anatomical and functional causes of disorders associated with age-related changes in the endocrine organs.	Age-related features and dysfunction of individual endocrine glands.	LO1 LO2	1/5	Consultation on the most difficult issues of the curriculum in the implementation of SIW, work with educational literature, delivery of SIW in the form of: -Description of the anatomical preparation on the anatomical panel "Pirogov" -presentation	Assessment sheets for certain forms of completed assignments
	Physiology Practical lesson 4 Endocrine glands. General characteristics of the endocrine glands.	Structural and functional characteristics of the hypothalamic-pituitary-adrenal system. The adrenal glands, pancreas, and sex glands. The mechanism of action of hormones.	LO1 LO2 LO3 LO4 LO5	2	discussion of the main topics, completion of practical work and test assignments	Oral interview, assessment of the performance of practical work, assessment of the performance of test tasks, assessment of the solution of situational tasks
	Histology SIWT/SIW 2 Midterm - II.	Consolidation of the completed material on the topics of lectures, practical exercises, SIWT and SIW.	LO1 LO2	2/7	Writing- solving integrated situational tasks	Checklist for the implementation of integrated situational tasks
	Preparation and conduction of the interim assessment		12			

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<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 11 frfom 24</p>


9.	Teaching and assessment methods					
9.1	Lectures		Introductory , overview (answers for control questions) Overview lecture. Feedback (control questions)			
9.2	Practical classess		Work with anatomical specimens, torso models, casts, charts, tablets, posters, on the interactive ‘Pirogov’ panel; discussion of the main topics; completion of practical work; seminar; situational (clinical) tasks; testing; checklist of histological specimens and microphotographs			
9.3	SIWT/SIW		Consultation on the most complex issues of the curriculum during the completion of independent work, working with educational literature, submission of independent work in the form of: – Description of an anatomical specimen on the ‘Pirogov’ anatomical table – presentation Preparation and defense of an essay and a presentation, compilation of a glossary			
9.4	Midterm		Written solution of integrated situational tasks			
10.	Evaluation criteria					
10.1	Criteria for evaluating the learning outcomes of the discipline					
	№ LO	Name of learning outcomes	Unsatisfactory	Satisfactory	Well	Great

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<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 12 frfom 24</p>

LO1	Demonstrates knowledge of the anatomical structure, physiological processes, and histological features of the digestive and endocrine systems normally	<p>1. Cannot describe organs, confuses their functions and location.</p> <p>2. Does not know the basic processes, cannot explain them.</p> <p>3. Cannot describe the fabrics and their features</p>	<p>1. Describes the main organs, but makes some mistakes.</p> <p>2. Understands the general gist, but the explanations are incomplete or erroneous.</p> <p>3. Provides a partial description of the tissues, not always accurate.</p>	<p>1. Gives a correct description of the organs, indicates the functions, allows minor inaccuracies.</p> <p>2. Confidently explains the processes, admits rare logical inaccuracies.</p> <p>3. Gives a correct description of the microstructure, mentions key histological features.</p>	<p>3. Fully and accurately describes the structure, functions and mutual arrangement of organs.</p> <p>2. Deeply understands and connects physiological processes with anatomical structures.</p> <p>3. Accurately and in detail describes the histological features, provides examples and compares tissues</p>
LO2	Applies knowledge of the anatomical, physiological and histological structure of the digestive and endocrine systems to explain their normal functioning and establish structural and functional relationships reflecting the role of these systems in ensuring the holistic functioning of the body.	<p>1. Cannot apply knowledge, explanations are missing or incorrect.</p> <p>2. Does not connect histology with the functions of systems.</p> <p>3. Does not see the interconnections between the systems</p>	<p>1. Applies knowledge partially, gives simple explanations with errors.</p> <p>2. Understands the basic role of histology, but the explanations are superficial.</p> <p>3. Sees individual connections, but cannot explain their significance</p>	<p>1. Confidently applies knowledge to explain the functions of systems, makes minor mistakes.</p> <p>2. Applies histological knowledge to explain physiology, with minor inaccuracies</p> <p>3. Describes the relationships, demonstrates an understanding of the role of each system in the body</p>	<p>1. Accurately and fully applies knowledge, provides detailed, logically verified explanations.</p> <p>2. Deeply uses histology to substantiate functional processes, connects structure and function at the microscopic level.</p> <p>3. Comprehensively and in detail analyzes the interrelationships, demonstrates systems thinking and understanding of the integrative role of these systems in the body</p>

<p> ONTÜSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		<p>  SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
<p> Department of Morphophysiology Department of Topographic Anatomy and Histology </p>		<p> 42/11-2025 52/11-2025 </p>
<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 13 frfom 24</p>

LO3	Evaluates and forms informed judgments about the relationship between the structure and function of the digestive and endocrine systems based on knowledge of anatomy, physiology and histology, taking into account their importance for maintaining homeostasis and the holistic functioning of the body.	<p>1. Does not see the relationship or gives incorrect estimates.</p> <p>2. Can't assess the relationship, judgments are wrong.</p> <p>3. Does not understand the role of systems in homeostasis</p>	<p>1. Understands the basic relationship, but evaluates superficially</p> <p>2. Understands the basic relationships, but gives partial and not always correct estimates.</p> <p>3. Understands the role of systems, but the explanations are incomplete</p>	<p>1. Reasonably assesses the relationship, with some reservations.</p> <p>2. Reasonably forms judgments, demonstrates an understanding of functions and structure.</p> <p>3. Confidently explains how the systems maintain homeostasis</p>	<p>1. Deeply and comprehensively assesses the relationship between the structure and function of the digestive system.</p> <p>2. Forms detailed, logically based judgments, connects anatomical and physiological features with the function of the endocrine system.</p> <p>3. Explains the importance of the digestive and endocrine systems in homeostasis and vital functions of the body in a reasoned and comprehensive manner.</p>
LO4	Uses medical terminology for a clear, correct and logical explanation of the anatomy and functions of the digestive and endocrine systems in oral and written form, observing the norms of professional ethics, deontology and principles of inclusion when communicating with teachers, classmates, patients and their relatives, taking into account different educational needs and communicative characteristics.	<p>1. Terminology is missing or used incorrectly, explanations are confusing.</p> <p>2. The presentations are unstructured, inconsistent, and difficult to understand.</p> <p>3. Violates ethical standards, allows disrespectful behavior</p>	<p>1. Uses basic terms, but with errors, the explanations are simple.</p> <p>2. The presentation is simple, partially logical, but with flaws.</p> <p>3. Partially complies with the norms, but allows inaccuracies in communication</p>	<p>1. Applies terminology correctly, explanations are clear and logical.</p> <p>2. The presentations are logical, consistent, and well-structured.</p> <p>3. Correctly adheres to the norms of professional ethics, behaves respectfully</p>	<p>1. Uses medical terminology fluently and accurately, the explanations are clear, consistent and scientifically based.</p> <p>2. The statements are clear, logical, structured, with convincing arguments.</p> <p>3. Adheres flawlessly to the norms of ethics and deontology, demonstrates a high level of professionalism in communication</p>

<p> ONTÜSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		 <p> SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
Department of Morphophysiology Department of Topographic Anatomy and Histology		42/11-2025 52/11-2025
Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition		Page 14 from 24


LO5	Plans and controls the process of self-study of the anatomical, physiological and histological features of the digestive and endocrine systems using modern educational resources, and also applies critical thinking to systematize and summarize knowledge in preparation for academic classes and exams.	1. Does not plan educational activities, does not set goals. 2. Does not use modern resources, limited to outdated or low-quality sources. 2. Does not control the process, does not notice errors and gaps	1. Plans his studies partially, the goals are not clearly formulated. 2. Uses resources, but the choice is not always optimal. 3. Periodically monitors, but does not always adjust the plan	1. Plans educational activities, sets specific goals. Confidently uses modern educational resources. Monitors the process, corrects training actions in a timely manner. 2. Applies critical thinking, systematizes and summarizes knowledge. 3. Prepares systematically, uses effective methods	1. Clearly and reasonably plans the learning process, taking into account personal capabilities and course requirements. 2. Efficiently and critically selects and applies modern educational resources. 3. Constantly monitors progress, analyzes mistakes, and adapts the plan to improve learning effectiveness.
10.2 Assessment methods and criteria					
Checklist for practical classes:					

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)

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.

<p> ONTÜSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		 <p> SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
<p> Department of Morphophysiology Department of Topographic Anatomy and Histology </p>		<p>42/11-2025</p> <p>52/11-2025</p>
<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 15 frfom 24</p>


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
Great	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.

Small group oral survey assessment checklist

Evaluation	Score	Evaluation criteria
Excellent	95-100	Answers confidently and logically, uses accurate terminology, demonstrates a deep understanding of the topic, and easily applies knowledge in analysis.
	90-94	The answer is complete, reasoned, the terminology is used correctly, small inaccuracies do not affect the quality of the answer.
Good	85-89	The answer is generally correct, but there are some inaccuracies, knowledge of the topic has been demonstrated.
	80-84	Demonstrates an understanding of basic concepts, makes logical mistakes or an incomplete answer.
	75-79	The answer is partially justified, there are gaps in logic, knowledge is applied to a limited extent.
	70-74	The answer is incomplete, with gaps in knowledge, and there is a superficial understanding of the topic.

<p> ONTÜSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		 <p> SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
Department of Morphophysiology Department of Topographic Anatomy and Histology		42/11-2025 52/11-2025
Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition		Page 16 from 24

Satisfactorily	65-69	Has difficulty answering questions, does not always use appropriate terms, and requires the help of a teacher.
	60-64	The answer is fragmentary, showing a partial understanding, unable to summarize or explain the connections.
	50-59	The answer is weak, inconclusive, and there are significant errors in terminology and understanding of the topic.
Unsatisfactorily	0-49	Can't answer questions, doesn't know the topic, lacks logic and terminology.

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)

№ п/п	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

Assessment sheet

<p> ONTÜSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		 <p> SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
Department of Morphophysiology Department of Topographic Anatomy and Histology		42/11-2025 52/11-2025
Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition		Page 17 frfom 24


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

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.

<p> ONTÜSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		 <p> SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
<p> Department of Morphophysiology Department of Topographic Anatomy and Histology </p>		<p> 42/11-2025 52/11-2025 </p>
<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 18 frfom 24</p>

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)

Evaluation	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.


<p> ONTUSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		 <p> SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
Department of Morphophysiology Department of Topographic Anatomy and Histology		42/11-2025 52/11-2025
Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition		Page 19 from 24

	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	Satisfactorily
C +	2,33	70-74	
C	2,0	65-69	
C -	1,67	60-64	
D+	1,33	55-59	


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<p style="text-align: center;"> Department of Morphophysiology Department of Topographic Anatomy and Histology </p>		<p>42/11-2025 52/11-2025</p>
<p style="text-align: center;">Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 20 frfom 24</p>

D-	1,0	50-54	
FX	0,5	25-49	Unsatisfactorily

11.	Educational resources
Electronic resources	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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. Околоулак, 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. Околоулак, 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. - 732 https://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	<p>Skeleton, set of bones, dummies, torso, electronic tablets, interactive anatomical table "Pirogova", anatomical panel "Pirogova" Microscopes, a set of micro-preparations, an atlas of microphotographs. Dummies, Sivtsev table, Forster perimeter, electrocardiograph, tonometer, phonendoscope, Sali hemometer. Simulators of the Practical Skills Center</p>


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Department of Morphophysiology Department of Topographic Anatomy and Histology	42/11-2025 52/11-2025
Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition	Page 21 frfom 24





Literature	<p>Anatomy</p> <p>Basics</p> <ol style="list-style-type: none"> 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 <p>Additional</p> <ol style="list-style-type: none"> 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 c 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 <p>Physiology</p> <p>Basics</p> <ol style="list-style-type: none"> 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 <p>Additional</p> <ol style="list-style-type: none"> 1. Sperelakis, Nikolas. Essentials of Physiology [Текст] = Основы физиологии: монография / Nikolas Sperelakis. - Boston : New York : Toronto, London, 1996. - 722 c 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 <p>Histology</p> <p>Basics</p> <ol style="list-style-type: none"> 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
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<p style="text-align: center;"> Department of Morphophysiology Department of Topographic Anatomy and Histology </p>		42/11-2025 52/11-2025
Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition		Page 22 from 24

	<p>4. Dudek Ronald W. Embryology / Ronald W. Dudek. - 5th ed. - [s. l.] : Wolters Kluwer, 2014. - 158 p. Перевод заглавия: Эмбриология</p> <p>Additional</p> <p>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</p> <p>2. Textbook of Human Histology. Inderbir Singh /Sixth Edition/Inderbir Singh 2010.-386 p. Перевод Учебник по гистологии человека</p>
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12.	Discipline Policy
<p>Requirements for Students:</p> <ol style="list-style-type: none"> 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. <p>During lectures / practical classes / SIWT sessions, students are prohibited from:</p> <ol style="list-style-type: none"> 1. Using mobile devices or gadgets. 2. Leaving the classroom or clinical/production base without the instructor's permission. <p>Dress Code Requirements:</p> <p>Students must:</p> <p>Wear a clean, ironed medical coat and cap/head covering.</p> <p>Maintain neat hair and short nails (for female students: bright makeup and nail polish are not allowed).</p> <p>Disciplinary Measures:</p> <p>For a single violation of the module policy, the student receives an oral warning from the instructor.</p> <p>For repeated violations, the student must submit a written explanation addressed to the Head of Department.</p> <p>For systematic violations, the Head of Department submits a report to the Dean's Office.</p> <p>Additional Regulations:</p> <p>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.</p> <p>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.</p> <p>For each unexcused lecture absence, a penalty of 1.0 point is deducted from the midterm control grade.</p> <p>For each unexcused SIWT absence, a penalty of 2.0 points is deducted from the SIWT grade.</p> <p>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.</p> <p>If a student does not achieve 50% of the current rating (i.e., 30 points), they are not allowed to take the final exam.</p>	
13.	Academic policy based on the moral and ethical values of the academy
<p>https://skma.edu.kz/ Regulations and Rules of South Kazakhstan Medical Academy (SKMA). Academic Policy of JSC "SKMA".</p>	
P.4 Student Code of Honor	
P.9 Organization of the educational process	

<p>ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ</p>		<p>SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»</p>
<p>Department of Morphophysiology Department of Topographic Anatomy and Histology</p>		<p>42/11-2025 52/11-2025</p>
<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 23 frfom 24</p>

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 - Darbicheva R.I.	
Date of Approval by the Departments	Protocol № 11 27.06.25	Department of Morphophysiology Tannabayev 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" Auyezkhankyzov D.	
Date of Approval by the Departments	Protocol № 11 26.06.25	Department of Topographic Anatomy and Histology - Murzanova D.A.	

<p> ONTÜSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ </p>		<p>  SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» </p>
<p> Department of Morphophysiology Department of Topographic Anatomy and Histology </p>		<p> 42/11-2025 52/11-2025 </p>
<p>Working Curriculum of the Discipline: Digestive and Endocrine Systems in Normal Condition</p>		<p>Page 24 frfom 24</p>