

SYLLABUS
Fall semester 2023-2024 academic year
Educational program "6BM10101 Medicine"

1. ACADEMIC INFORMATION ABOUT THE SUBJECT			
1.1	Faculty/school: Medicine and Healthcare/ Higher school of medicine	1.6	Number of credits (ECTS): General number of credits: 16 lectures 8/ practical classes 8
1.2	Educational program (EP): Medicine "6BM10101"	1.7	Prerequisites:
1.3	Agency and year of EP accreditation Date of issue: 28.01.2022 Registration No.: AB 3884 Independent agency for accreditation and rating	1.8	Independent work of the student: 5,3
1.4	Name of subject: Normal structure and function of human body	1.9	Independent work of the student under the guidance of a teacher (IWST): 2,6
1.5	Subject ID: 100044	1.10	Mandatory component - yes / Elective component - no
2. Description of subject			
	The course continues the formation of a holistic understanding of the typical structure and principles of the functioning of the human body through the integrated teaching of histology, anatomy and physiology and biophysics. The morphology and physiology, sex and age characteristics of the respiratory, endocrine, digestive, lymphatic and immune, urinary, reproductive systems and their role in maintaining normal homeostasis are considered in detail. Necessary attention is paid to the formation of the appropriate terminological apparatus.		
3 Purpose of subject			
	to teach how to apply knowledge of morphology (anatomy and histology) and physiology of organs and systems of the human body (respiratory, cardiovascular, hematopoietic, digestive, urinary, reproductive, endocrine, musculoskeletal and skin as an organ, nervous, sensory organs) in age and the sexual aspect of human organ systems for understanding vital processes and maintaining homeostasis.		
4. Learning outcomes (LO) of subject			
	LO of subject	LO according to the educational program, with which the LO is associated by subject	
	1.demonstrate knowledge of anatomy, topography and visualization in the age and sex of human organ systems; 2.be able to identify cellular and non-cellular structures that make up the tissues of organ systems on microscopic specimens with an understanding of their formation and function; 3.demonstrate knowledge of the physiological processes that determine the activity and mechanisms of regulation of human organs and systems (digestion, excretion, movement, blood formation, functioning of the senses); 4.understand and apply knowledge of the neuro-endocrine regulation of homeostasis, metabolism in different situations; 5.understand the processes and anatomical and physiological processes during pregnancy, development and growth, involutional changes, with various physiological stress variants;	Apply detailed knowledge of the typical structure and functions of the human body at the level - from molecules, cells, to organs and systems, the body as a whole	

	6.demonstrate knowledge of the physiology of higher nervous activity and the cognitive process; 7.be able to conduct research on basic physiological functions; 8.demonstrate the ability to identify learning gaps and create strategies to enhance one's own knowledge and skills.	
	9. demonstrate analytical skills in the integration of knowledge of the anatomy, histology and function of the human body to understand and evaluate normal life processes. 10. independently find, analyze and summarize educational and scientific information in relation to situations related to the course content;	Identify and solve problems affecting human health based on the application of knowledge about the underlying pathological processes and the biological damage they cause.
	11. work in a team, defend your point of view reasonably, consider the opinions of others, provide and receive feedback correctly using interpersonal and group communication skills. 12. recognize the importance and observe ethical principles, demonstrate responsibility and honesty in all educational interactions;	Effectively build dynamic relationships between the doctor and the patient that occur before, during and after medical treatment in compliance with the principles of ethics and deontology based on knowledge of human behavior, patient psychology, taking into account cultural characteristics and race
	13. communicate effectively with other students and teachers regarding medical and scientific information, articulate their opinions clearly when discussing the morphological structure and physiological processes, and work effectively as a member of the team.	Work effectively in an interprofessional / multidisciplinary team with other healthcare professionals in organizing and managing the diagnostic and treatment process; collect and communicate medical information, verbally and in writing, to provide safe and effective patient care.
5.	Formative assessment methods:	
5.1	Control work - yes	5.5 Essay -yes
5.2	Laboratory classes- no	5.6 Case-study -yes
5.3	Project (individual/group)- group project	5.7 Portfolio of scientific papers
5.4	Mutual evaluation	5.8 Exam Univer system - offline 2 steps exam – OSPE, written part

6.	Detailed information about the subject		
6.1	Academic year: 2023-2024	6.3	Schedule (days of classes, time): by schedule
6.2	Semester: 3	6.4	Location (academic building, office, platform and link to the training meeting using DOT): Tole bi 96, classrooms by schedule
7.	Teacher		
Position	Full Name	Contact information (tel., e-mail)	Time for consultations or by appointment
PhD	Bizhanova Zhadyra	bizhanova.iadira@med-kaznu.com	
	Kagarmanova Aray	kagarmanova.aray@med-kaznu.com	
8.	Subject content		
Week #	Topics and tasks		Hours

1	Lecture: General Properties and anatomy of the Autonomic Nervous System	3
	Practical lesson: General Properties and anatomy of the Autonomic Nervous System	3
	Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p.555-565	
	Lecture: Central Control of Autonomic Function	2
	Practical lesson: Autonomic Effects on Target Organs. Central Control of Autonomic Function	2
	Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p.565-570	
	IWST - consultations on IWS, models, discussion of results of written works, etc	
	Lecture: Histology Sensory Organs. Organs of hearing and balance, taste.	2
	Practical lesson: Histology Sensory Organs Organs of hearing, balance, taste buds.	2
	Task:	
	Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.454-479	
	2	Lecture: Properties and types of sensory receptors
Practical lesson: Properties and types of sensory receptor. The general senses		2
Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urcvzrq		
Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p.576-584		
Lecture: The chemical senses. Taste and smell		2
Practical lesson: The chemical senses. Taste and smell.		2
Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urcvzrq		
Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p.584-589		
Lecture: Histology. Sensory organs. Organs of eye (cornea, sclera, choroid, ciliary body, iris) retina, blood vessels of retina. Blood retina barrier. Organs of smell.		2
Practical lesson: Practical lesson 1 Histology Sensory Organs. Organs of eye (cornea, sclera, choroid, ciliary body, iris) retina, blood vessels of retina. Blood retina barrier. Organs of smell.		2
Task: https://forms.office.com/r/tCgUFitK2R		
Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.454-479		

	Lecture: The laws of geometric optics -1	1
	Practical lesson: The laws of geometric optics.	1
	Task:	
	Literature for reading (textbook, pages and chapters):	
	Lecture: Histology of Endocrine System I General features of the Endocrine system. Microscopic Anatomy of endocrine organs. Hypothalamus, pituitary, pineal gland.	1
3	Lecture: Eye and vision	3
	Practical lesson: Eye and vision	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urevzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 603-620	
	Lecture: Hearing and equilibrium	2
	Practical lesson: Hearing and equilibrium	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urevzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 589-602	
	Lecture: Histology of Endocrine System I General features of the Endocrine system. Microscopic Anatomy of endocrine organs. Hypothalamus, pituitary, pineal gland of Endocrine System II Microscopic Anatomy of endocrine organs. Adrenal gland, thyroid, parathyroid glands.	1
	Practical lesson: Histology of Endocrine System I General features of the Endocrine system. Microscopic Anatomy of endocrine organs. Hypothalamus, pituitary, pineal gland.	2
	Task:	
	Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.454-479	
	Lecture: The laws of geometric optics. Eye as an optical system	1
	Practical lesson: The laws of geometric optics. Eye as an optical system	1
Task:		
Literature for reading:		
4	Lecture: Overview of the endocrine system. The hypothalamus and the pituitary gland.	3
	Practical lesson: Overview of the endocrine system. The hypothalamus and the pituitary gland.	3
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urevzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 627-637	
	Lecture: Other endocrine glands	2
	Practical lesson: Other endocrine glands	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urevzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 637-647	
	Lecture: Hormones and their action	2

	Lecture: Histology of Endocrine System II. Microscopic Anatomy of endocrine organs. Adrenal gland, thyroid, parathyroid glands.	2
	Lecture: Respiratory system: nasal cavity, trachea, bronchi, bronchioles, alveolar ducts.	
	Practical lesson: Histology of Endocrine System I. General features of the Endocrine system. Microscopic Anatomy of endocrine organs. Hypothalamus, pituitary, pineal gland.	2
	Task:	
	Literature for reading: Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.228-254	
5	Practical lesson: Hormones and their action	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 647-656	
	Lecture: Endocrine disorders	3
	Practical lesson: Endocrine disorders	3
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 659-663	
	Lecture: Stress and adaptation. Eicosanoids and other signaling molecules	2
	Lecture: Histology of urinary system 1.	2
	Practical lesson: Histology of Endocrine System II. Microscopic Anatomy of endocrine organs. Adrenal gland, thyroid, parathyroid glands.	2
	Task:	
	Literature for reading: Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.228-254	
6	Practical lesson: Stress and adaptation. Eicosanoids and other signaling molecules	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 656-658	
	Lecture: Respiratory system 1. Anatomy of the respiratory system.	3
	Practical lesson: Respiratory system 1. Anatomy of the respiratory system.	3
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 846-857	
	Lecture: Respiratory system 2. Pulmonary ventilation.	2
	Lecture: Histology of urinary system 2.	2

	Practical lesson: Human tissue 7-8 Respiratory system: nasal cavity, trachea, bronchi, bronchioles, alveolar ducts.	2
	Task:	
	Literature for reading: Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.276-300	
7	Practical lesson: Respiratory system 2. Pulmonary ventilation.	2
	Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 857-867	
	Lecture: Respiratory system 3. Gas exchange and transport.	3
	Practical lesson: Respiratory system 3. Gas exchange and transport.	3
	Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 868-878	
	Lecture: Histology of Digestive System I. General features of the Digestive Tract. Histology of the esophagus, stomach, small intestine, large intestine.	2
	Practical lesson: Histology urinary system 1.	2
	Task:	
	Literature for reading: Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.380-404	
8	Lecture: Respiratory system 4. Respiratory disorders.	2
	Practical lesson: Respiratory disorders.	2
	Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 878-880	
	Lecture: Urinary system 1. Functions of the urinary system. Anatomy of the kidney.	3
	Practical lesson: Urinary system 1. Functions of the urinary system. Anatomy of the kidney.	3
	Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 887-895	
	Lecture: Histology of Digestive System I. General features of the Digestive Tract. Histology of the esophagus, stomach, small intestine, large intestine.	2
	Practical lesson: Histology urinary system 2.	2
	Task:	
	Literature for reading: Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.380-404	

	CC-1 ANS ES Resp System Histology	3
9	Lecture: Urinary system 2. Urine formation I: Glomerular filtration.	2
	Practical lesson: Urinary system 2. Urine formation I: Glomerular filtration.	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 895-900	
	Lecture: Urinary system 3. Urine formation II: Tubular reabsorption and secretion	2
	Practical lesson: Urinary system 3. Urine formation II: Tubular reabsorption and secretion	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 901-905	
	Lecture: Histology of digestive system II. Microscopic Anatomy of the Glands associated with the Digestive Tract. Salivary Glands.Liver, pancreas.	2
	Practical lesson: Histology of Digestive System I. General features of the Digestive Tract. Histology of the esophagus, stomach, small intestine, large intestine.	3
	Task:	
	Literature for reading:Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.300-328	
	10	Lecture: Urinary system 4. Urine formation III: Water conservation
Practical lesson: Urinary system 4. Urine formation III: Water conservation		3
Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq		
Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 905-908		
Lecture: Urinary system 5. Urine and Renal Function Tests		2
Practical lesson: Urinary system 5. Urine and Renal Function Tests		2
Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq		
Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 908-911		
Lecture: Fluid balance. Electrolyte balance		3
Lecture: Histology Reproductive System Male Reproductive System.		3
Practical lesson: Histology of digestive system II. Microscopic Anatomy of the Glands associated with the Digestive Tract. Salivary Glands. Liver, pancreas.		3
Task:		

	Literature for reading:Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.328-377	
11	Practical lesson: Fluid balance. Electrolyte balance	3
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 921-933	
	Lecture: Acid–base balance	2
	Practical lesson: Acid–base balance	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 933-939	
	Lecture: General Anatomy and Digestive Processes. The Mouth Through Esophagus.	3
	Lecture: Histology Reproductive System 1. Female reproductive system: Ovaries, ovarian follicles, fallopian tubes.	2
	Practical lesson: Histology Reproductive System Male Reproductive System	2
	Task:	
	Literature for reading:Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.404-434	
12	Practical lesson: General Anatomy and Digestive Processes. The Mouth Through Esophagus.	3
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 945-955	
	Lecture: The Stomach	2
	Practical lesson: The Stomach	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 956-963	
	Lecture: The liver, gallbladder, and pancreas. The small intestine and the large intestine.	3
	Lecture: Chemical digestion and absorption.	2
	Lecture: Histology Reproductive System 1. Female reproductive system: Ovaries, ovarian follicles, fallopian tubes.	2
	Practical lesson: Histology Reproductive System Male Reproductive System.	2
	Task:	
	Literature for reading:Literature for reading: Gartner, Leslie P., 1943-Color atlas and text of histology / Leslie P. Gartner, James Hiatt. — 6th ed., p.434-454	

13	Lecture: Nutrition	2
	Practical lesson: The liver, gallbladder, and pancreas. The small intestine and the large intestine.	3
	Task:	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 965-974, 981-985	
	Lecture: Carbohydrate metabolism. Lipid and protein metabolism	3
	Practical lesson: Chemical digestion and absorption.	2
	Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading: Kenneth Saladin, pages 974-981	
	Lecture: Histology Female reproductive system: Uterus. Menstrual Cycle	2
	Practical lesson: Embryology 1. Human embryology sex cells. Early stages of development of the human embryo fertilization	2
	Task:	
	Literature for reading: Dudek, Ronald W., 1950- Embryology / Ronald W. Dudek, James D. Fix. — 3rd ed. 1-14	
	14	Lecture: Metabolic states and metabolic rate.
Practical lesson: Nutrition		2
Task:		
Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 992-1002		
Lecture: Body heat and thermoregulation		2
Practical lesson: Carbohydrate metabolism. Lipid and protein metabolism		3
Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urevzrq		
Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 1003-1012		
Lecture: Human embryology. Early stages of development of the human embryo implantation. Cleavage.		2
Practical lesson: Histology Female reproductive system: Mammary Glands. Prepubertal Mammary Gland. Resting Adult Mammary Gland. Pregnant Adult Mammary Gland. Lactating Mammary Gland. Correlation of the endometrial changes with events in the ovary and with changing pituitary and ovarian hormone levels.		2
Task:		
Literature for reading: Inderbir Singh's Textbook of Human Histology, Revised Reprint : Sep 2019 chapter 21		
15		Lecture: Male reproductive anatomy. Puberty, hormonal control, and climacteric.
	Practical lesson: Metabolic states and metabolic rate.	3
	Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urevzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 1013-1016	
	Lecture: Sperm and semen	2

	Practical lesson: Body heat and thermoregulation	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 1016-1019	
	Lecture: Lecture 45 Human embryology gastrulation. Differentiation of germ layers.	2
	Practical lesson: Human embryology. Sex cells. Early stages of development of the human embryo.	3
	Task:	
	Literature for reading:Dudek, Ronald W., 1950- Embryology / Ronald W. Dudek, James D. Fix. — 3rd ed. 1-14	
16	Lecture: Female reproductive anatomy. Puberty and menopause.	3
	Practical lesson: Male reproductive anatomy. Puberty, hormonal control, and climacteric.	3
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 1031-1041	
	Lecture: Oogenesis and the sexual cycle.	3
	Practical lesson: Sperm and semen	2
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 1041-1046	
	Lecture: Human embryology, organogenesis.	2
	Practical lesson: Human embryology. Fertilization. Cleavage. Implantation.	2
	Task:	
	Literature for reading: Langman's medical embryology. — 12th ed. / T.W. Sadler. p. 3-39	
17	Lecture: Pregnancy and childbirth. Lactation	2
	Practical lesson: Female reproductive anatomy. Puberty and menopause.	3
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 1056-1067	
	Practical lesson: Oogenesis and the sexual cycle.	3
	Task (if available): https://classroom.google.com/c/NTYyODIzNjIwNzM3?cjc=urcvzrq	
	Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 1067-1075	
	Lecture: Human embryology. Extraembryonic organs amnion,yolk sac, chorion, placenta, umbilical cord.	2

	Practical lesson: Human embryology gastrulation. Differentiation of germ layers, organogenesis. Task: Literature for reading: Langman's medical embryology. — 12th ed. / T.W. Sadler. p. 39-63	2
18	Practical lesson: Pregnancy and childbirth. Lactation Task (if available): https://classroom.google.com/c/NTYvODIzNjIwNzM3?cjc=urcvzrq Literature for reading (textbook, pages and chapters): 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function, 9th Edition (2020, McGraw-Hill Education), ISBN-10 1260571297, 978-1260571295 p. 1077-1086	2
	Practical lesson: Human embryology Extraembryonic organs – amnion, yolk sac, chorion, placenta, umbilical cord. Task: Literature for reading: Langman's medical embryology. — 12th ed. / T.W. Sadler. p. 63-115	2
Summary CPC в 1PK и во 2 PK и указать на какой неделе, сколько часов требуется на выполнение этого CPC CPCII время для консультации CPC указать также по неделям и часам		
9.	Teaching methods of the subject* (lecture, mini-lecture, interactive lecture, case-based lecture, Case based Learning (CBL) - individual, group, streaming; integrated, interdisciplinary, project method (individual, group, integrated, interdisciplinary), working with models, discussion, simulations, Problem Based Learning (PBL), Team Based Learning (TBL), panel discussions, conferences, virtual laboratory work, solving typical/situational tasks. <i>*Выберите применимое для Вашей дисциплины</i>	
10.	Methods of formative assessment: (оценивание без баллов) quiz, test, interactive test, self-assessment test, reflexive essay, mutual evaluation/reviewing/commenting и др. внесите Ваши методы оценивания)	
11.	Summative assessment methods (from point 5): 1) testing using video, drawings, photographs, diagrams, microphotographs or OSPE using dummies and micro preparations - as part of the current / midterm / final control: final results No. 1, 3; 2) solution of situational problems, analysis of cases - within the framework of the current / midterm / final control - final results No. 2, 4, 5, 6, 9;10;11;12 3) interview / oral interview - within the framework of the current / milestone / final control - final results No. 2, 4, 5, 6;12;13	
10.	Summative assessment In the course, 2 controls (2 interim examinations) are planned, within the framework of which the development of the material is evaluated. For the semester, admission rating points are set: $AR = (IE1 + IE2) / 2$, where IE1 / IE2 / = the sum of all points for classes + points for interim examination control and IWS of the corresponding period**. IE1 – 1-9 weeks, IE2 - 10-18 weeks. The final control (exam) is carried out in 2 stages. The first stage is testing or OSPE*** (50%), the second stage is an oral survey of tickets (50%). The final grade for the discipline = $AR * 0.6 + Exam * 0.4$ **AR-admission rating, IE - interim examination, MT - midterm examination, IWS - independent work of student ***Objective Structured Practical Exam - students passing stations in the number from 5 to 10 in accordance with the topics submitted for the current / milestone / final controls for a limited time.	

#	Type of educational activity	Date	Points	as a percentage %
1	Lecture	According to the schedule	-	Not graded
2	Practical class (current control) 1. Latin Test 2. Written control 3. Working with models 4. Oral interview	According to the schedule	2 points for class	2% out of IE (100 %)
3	Colloquium 1 1 stage - written control – an open-type test based on the learning outcomes 2 stage – OSPE	According to the schedule, in the 7th week		1 stage - ... points =...% out of IE1 2 stage - ... points =...% out of IE1
	Colloquium 2	According to the schedule, in the 18th week		
	IWS		5 points	5% out of IE1
	IE1	Week 7	100 points, cumulative	30% of the final grade for the subject
		Week 15		
4	Final exam 1 этап 2 этап	According to the session schedule	100 points: 1 stage- 50 points 2 stage– 50 points	40 % of the final score

10.	Assessment		
Rating by letter system	Digital equivalent of points	Percentage Digital equivalent of points Percentage	Description of the assessment (changes should be made only at the level of the decision of the Academic Quality Committee of the faculty)
A	4,0	95-100	Excellent. Exceeds the highest task standards.
A-	3,67	90-94	Excellent. Meets the highest standards of the assignment.
B+	3,33	85-89	Good. Very good. Meets the high standards of the assignment.
B	3,0	80-84	Good. Meets most of the job standards.
B-	2,67	75-79	Good. More than enough. Shows some reasonable ownership of the material.
C+	2,33	70-74	Good. Acceptable. Meets the basic standards of the task.
C	2,0	65-69	Satisfactory. Acceptable. Meets some basic job standards.
C-	1,67	60-64	Satisfactory. Acceptable. Meets some basic job standards.
D+	1,33	55-59	Satisfactory. Minimally acceptable.

D	1,0	50-54	Satisfactory. Minimally acceptable. The lowest level of knowledge and completion of the task.
FX	0,5	25-49	Unsatisfactory. Minimally acceptable.
F	0	0-24	Unsatisfactory. Very low productivity.
11.	Educational resources (use the full link and specify where you can access the texts/materials)		
Literature			Basic Additional
Electronic resources (including, but not limited to: electronic library catalog, databases of scientific literature, databases, animation, modeling, professional blogs, websites, other electronic reference materials (for example, video, audio, digests))			
Laboratory physical resources			Anatomical model center, laboratories, educational pharmacy, etc.
Special software			
12.	Teacher's expectations from students		
The student	<ul style="list-style-type: none"> - attends all classes and lectures - actively participates in classroom classes during formative assessment, in group work, - performs tasks on time - shows respect for teachers, university staff and students - carefully handles university property (models, desks, chairs, etc.) - observes cleanliness and order on campus and classrooms - uses gadgets in classes only with the teacher's permission - for all issues within the discipline is addressed to the teacher of this discipline, for general academic issues – to his advisor - correspondence is carried out only through a messenger approved by the teacher, at the time regulated by the teacher 		
13.	Discipline Policy		
	<p>The discipline policy is determined by the Academic Policy and the Policy of Academic Integrity of Al-Farabi Kazakh National University. If the links will not open, then you can find the relevant documents in the Univer IC.</p> <p>The student is obliged to:</p> <ul style="list-style-type: none"> - attend classes in a white coat - wear gloves when working with models <p>The student must follow the Code of Professional Conduct of Higher School of Medicine</p>		

	The behavior of the student at the exams is regulated by the "Rules for the final control", "Instructions for the final control of the autumn / spring semester of the current academic year" (current documents are uploaded to the IS "Univer" and updated before the start of the session); "Regulations on checking text documents of students for the presence of borrowings".	
14.	Principles of inclusive learning	
	<p>1. Constantly preparing for classes: For example, supports statements with appropriate links, makes short summaries Demonstrates effective learning skills, helps in teaching others</p> <p>2. Take responsibility for your training: For example, manages your training plan, actively tries to improve, critically evaluates information resources</p> <p>3. Actively participate in the group's training: For example, actively participates in the discussion, willingly takes assignments</p> <p>4. Demonstrate effective group skills For example, he takes the initiative, shows respect and correctness towards others, helps to resolve misunderstandings and conflicts</p> <p>5. Skillful communication skills with peers: For example, he listens actively, is receptive to nonverbal and emotional signals Respectful attitude</p> <p>6. Highly developed professional skills: Strives to complete tasks, looking for opportunities for more training, confident and qualified Compliance with ethics and deontology in relation to patients and medical staff Insubordination.</p> <p>7. High introspection: For example, he recognizes the limitations of his knowledge or abilities, without becoming defensive or reproaching others</p> <p>8. Highly developed critical thinking: For example, accordingly demonstrates skills in performing key tasks, such as generating hypotheses, applying knowledge to cases from practice, critically evaluating information, making conclusions aloud, explaining the process of reflection</p> <p>9. Fully complies with the rules of academic behavior with understanding, offers improvements in order to increase efficiency. Observes the ethics of communication – both oral and written (in chats and appeals)</p> <p>10. Fully complies with the rules with full understanding of them, encourages other members of the group to adhere to the rules Strictly adheres to the principles of medical ethics and PRIMUM NON NOCER</p>	
15.	Distance/Online learning	
	Distance/online learning is implemented at the University in accordance with the Order of the Minister of Education and Science of the Republic of Kazakhstan dated March 20, 2015 No. 137 "On approval of requirements for educational organizations to provide distance learning and rules for organizing the educational process for distance learning and in the form of online learning for educational programs of higher and (or) postgraduate education"; according to the Rules of the organization of training with the use of DOT at the University; Instructions for the final control of the autumn/spring semester of the current academic year (the current document is in the IS "Univer"); "Regulations on checking text documents of students for the presence of borrowings".	
16.	Approval and review	
	Head of the Department	Signature
		Full Name
	Committee on the Quality of Teaching and Learning of the Faculty	Protocol No.
		Date of approval
	Dean of Faculty	Signature
		Full Name

**Fall semester 2023-2024 academic year
Educational program "6BM10101 Medicine"**

Independent work of students (IWS)
“Morphology and physiology of human body”

№	IWS tasks	Format	Deadlines (school week)	Points
1	Individual research on endocrine disorders diagnostics and treatment from https://pubmed.ncbi.nlm.nih.gov/	Powerpoint presentation with 25 slides	14th week	10

To perform the IWS, both the recommended course literature and sources are used, as well as those found independently. The IWS is delivered strictly on schedule. In case of valid circumstances (if there is documentary evidence), the IWS may be accepted outside of the schedule.

Evaluation sheet of the student's independent work

1. Material design		
25 points Designed in accordance with general and technical requirements, including a list and references to the literature used	24-17 points Designed in accordance with general and technical requirements, incorrectly designed or not provided references to the literature used	16-0 points Designed carelessly, there are violations in the structure of the material, there are no references to the sources used
2. The content of the material and its informativity		
25 points Corresponds to the topic and task. All the necessary information has been fully conveyed.	24-17 points Partially corresponds to the topic/task. Overloaded with material, or there is not enough information.	16-0 points Does not correspond to the topic/task.
3. The amount of work		
25 points The work is finished. All sections/components are presented	24-17 points Up to 50% of the work has been completed. The main sections/components are presented	16-0 points Up to 30% of the work has been completed. The main sections/components are presented
4. Mastery of material		
25 points Fluency in the material	24-17 points Incomplete knowledge of the material. The information was reported with inaccuracies.	16-0 points The work performed does not reflect the mastery of the material