

The plan of lectures for foreign students of the General Medicine Faculty for Anatomy during 2024-20245 year

№	Topic	h
I semester		
1.	Introduction to anatomy. ¹ The subject of human anatomy. Principles of the modern anatomy and methods of investigation in the anatomy. Content of the subject. History of anatomy. Human development. General structure of human body development. The concept of organs and organ systems. Anatomical terminology ²	2
2.	Axial skeleton. ¹ The development of axial skeleton in phylo- and ontogenesis. Variants and anomalies of axial skeleton. The stages of axial skeleton evolution. The features of newborn vertebral column, formation of lordosis and kyphosis. The points of ossification. Age-related changes in the axial skeleton. Variants and anomalies ²	2
3.	Phylo- and ontogenesis of the skeleton of the upper and lower limbs. ¹ Regularities of the structure of the additional skeleton. Phylo- and ontogenesis of the additional skeleton. Additional bones of the limbs. The points of ossification. Variants and anomalies of upper limbs. ²	2
4.	Phylo- and ontogenesis of the skull. Craniometrical points of cerebral and facial skull. ¹ Development of the skull in fetal period and newborn. General patterns of the skull. Stages of skull development in phylo- and ontogenesis. Mammalian skull, origin of the auditory ossicles and the temporomandibular joint. Ontogenesis of the human calvaria. Anatomy of newborn skull. ² ¹ Cranial index and parameters. Counterforces of skull. Typical places of fractures for cranial base. Areas of typical jaw fractures. ²	2
5.	General arthrology. ¹ Phylo - and ontogenesis of the joints. Classification of joints. Particular features of the structural elements of the joints. Joint biomechanics. ²	2
6.	The anatomy of the muscular system. Anatomy and topography of the abdominal muscles, muscles of the back and thorax. ¹ Muscle development. The concept of myotome. Muscle structure. Auxiliary muscular apparatus. Classifications of muscles. Variations and abnormalities of skeletal muscles. Topographical anatomy of the body: limits, cellular and intermuscular spaces, triangles, canals. ²	2
7.	Anatomy and topography the muscles of the head and neck. ¹ Topographical elements of the head and neck: limits, cellular and intermuscular spaces, triangles, canals. Clinical significance. ²	2
8.	Topographical elements of the body and upper limbs. ¹ Topographical elements of the limbs: limits, cellular and intermuscular spaces, triangles, canals. Clinical significance.	2
9	Topographical elements of the lower limbs. ¹ Lacunas, limits, cellular and intermuscular spaces, triangles, canals. Clinical significance. Inguinal canal: walls, contents. Femoral canal and femoral triangle.	2
	Total for 1st semester	18

II semester		
1.	Introduction to splanchnology. General review of the alimentary system.¹ Functions, development of digestive system in onto- and phylogenesis: oral cavity, palate, tongue, major salivary glands, teeth. Age features. Classification, structure, individual and group sings, tooth eruption. Variants and anomalies.	2
2.	Hollow organs of digestive system.¹ Anatomy, development, variants and anomalies, methods of clinical examination. Crossing of airways and digestive tract in the pharynx. Anatomical sphincters of esophagus. Factors preventing regurgitation of food from stomach to esophagus. Anatomical difference between small and large intestine. Physiological sphincters of large intestine. Age features.	2
3.	Liver, pancreas, peritoneum.¹ Features, development, variations and anomalies, methods of clinical examination. Segmental structure of the liver according to Quino. Anatomical features of the digestive system organs in newborns and young children. Canals, pouches, sinuses and fossas of abdominal cavity ²	2
4.	Respiratory system. Urinary system.¹ Development of the respiratory and urinary system in phylo- and ontogenesis. Functions of larynx as an organ of respiration and voice formation. Anatomical differences between the right and left lungs (by mass, shape, number of lobes) and the meaning of the division of the lungs into lobes. The organs of the urinary system according to the process of urination. Fixation of the kidney. Lobe, lobule, segment of the kidney. Kidney function. The functional significance of the bladder triangle. Variants of the structure and anomalies of the respiratory and urinary system. ²	2
5.	Development of the genital organs. Perineum.¹ Male genital organs: internal and external, anatomy, topography and functions. Female genital organs: internal and external, its structure, topography and functions. Perineum: muscles and fascias. Variants and anomalies of genital organs. ²	2
6.	Cardiovascular system.¹ Phylo- and ontogenesis of the heart and blood vessels. General patterns of the arteries and veins. Variants and anomalies of the cardiovascular system. Methods of the cardiovascular examination. Collateral blood supply. Fetal blood circulation.	2
7.	The lymphatic system.¹ Principles of the structure of the lymphatic system (capillaries, vessels, trunks and ducts, their general characteristics). Central and peripheral organs of immune system. Lymphatic node, thymus, spleen. Lymphatic vessels, lymphatic drainage from different parts of the body.	2
Total for 2nd semester		14
III semester		
1	Nervous system.¹ Phylo- and ontogenesis of the nervous system. General information about the nervous system. The formation of the cerebral parts as the origin of the brain vesicle formation. Variants and anomalies of the nervous system. ²	2
2	Reticular formation. Limbic system.¹ Definition of reticular formation by Kupriyanov. Morphofunctional features of neurons in the reticular formation. The nuclei of the reticular formation. Reticulopetal connections. Morphological formations of the olfactory brain. Morphological structures of the limbic system. "Neural chain of the hippocampus". Functions of the hippocampus. Limbic system dysfunctions. Striopallidal system: its connections with other anatomical structures of the brain ²	2
3	Structure of the cerebral cortex.¹ The dynamic localization of functions in the cerebral cortex. The first and second signal systems. The cerebral architectonics. Cytoarchitectonics of the cortex. The "analyzer" according to Pavlov's definition. The localization of nuclei of the second signaling system. Characteristics of the	2

	centers. ²	
4	Peripheral nervous system. ¹ Development and general structure of cranial nerves. Development and general structure of spinal nerves. ²	2
5	Vegetative nervous system (sympathetic part). ¹ Central and peripheral parts of vegetative nervous system. Organization of the vegetative nervous system. Parasympathetic and sympathetic parts of vegetative nervous system. ²	2
6	Endocrine glands. ¹ Development of endocrine glands in ontogenesis. The relationship between the nervous and endocrine systems. Features of the structure and function of the endocrine glands. The relationship of the nervous and endocrine systems. ²	2
7	Organs of hearing and vision ¹ Anatomy of the ear: external, middle and internal ear. Structures auxiliary to the eye. The auditory pathway. Anomalies of development. Anatomy of the eye. Structures auxiliary to the eye. The optic pathway. Anomalies of development. ²	2
	Total for 3rd semester	14
	Total	46

Verified on the chair meeting №22, 28 » June 2024г.

Head of the chair for Anatomy



S.A. Kalashnikova