Thematic lesson plan of independent work of the student in the discipline «Human anatomy – anatomy of head and neck»
for students started studying in 2025
the educational program 31.05.03 Dentistry,
form of study full-time
for the 2025-2026 academic year

№	The topic of independent work	Hours (academic)
1 semester		
1	**Skeletal system. Axial skeleton. Appendicular skeleton. Its development in phylo- and ontogenesis. Variants and anomalies of bones.** [1] Regularities in the structure of the skeleton of the trunk. Features of the anatomy of the skeleton of the trunk at various stages of evolution. The development of the skeleton of the trunk is distinguished in prenatal ontogenesis. Age-related changes in the skeleton of the trunk. Variants and anomalies Regularities of the structure of the additional skeleton. Phylo- and ontogenesis of the upper limb bones. Features of the structure of the bones of the upper limb. Variations and abnormalities of the upper limb bones. The development of the bones of the lower extremity in phylo- and ontogenesis. Features of the structure of the bones of the lower limb. Variations and abnormalities of the bones of the lower limb. [2]	9
2	**General arthrology. Private anatomy of joints. The anatomy of the muscular system.** [1] Phylo - and ontogenesis development of compounds. Classification of bone joints. Features of the structural elements of the joints. Joint biomechanics. Muscle development. The concept of myotome. Muscle structure. Muscle auxiliary apparatus. Muscle classifications. Skeletal muscle variations and abnormalities [2]	9
3	**Functional anatomy of respiratory, urinary and reproductive systems. The functions, development in phylo- and ontogenesis. Variants and anomalies. Methods of investigation.**[1] The place of the respiratory system in the hierarchy of the functional systems of the body. Development of the respiratory system in phylo- and ontogenesis. Variant anatomy and anomalies of the respiratory system. Organs and tissues of the body that have the functions of secreting toxic substances. Ontogenesis of the urinary system. Variants of the structure and anomalies of the organs of the urinary system. General patterns of genital anatomy. The main directions of the evolution of the male genital organs. Variants of the structure and anomalies of the genital organs.[2]	9
4	**The cardiovascular system. Functional anatomy of the heart. General angiology. Lymphoid system.**[1] The heart, its development in phylo- and ontogenesis. Variations and anomalies of the heart. Methods of intravital examination of the heart. General patterns of the structure of blood vessels. Development, principles of location and topography of branches. General patterns in the vascular system. Classification of vessels. Development, structural features of arterial vessels. Patterns of the course and branching of arteries. Distribution of arteries in organs. Development, structural features of venous vessels. Hemodynamics in the veins. Venous depots. Microcirculation. Collateral circulation. Age-related changes. Blood circulation in the fetus. Principles of the structure of the lymphatic system (capillaries, vessels, trunks and ducts, their general characteristics). Pathways for the outflow of lymph from regions of the body into the venous bed.[2]	9
5	**Limbic system. Reticular formation.**[1] Morphological formations of the rhiencephalon. Morphological structures belonging to the limbic system. "Hippocampal Circuit". Functions of the	9

	hippocampus. Dysfunctions of the limbic system. Striopallidal system: its connections with other anatomical structures of the brain. Morphofunctional features of neurons of the reticular formation. Nuclei of the reticular formation, their morphofunctional characteristics.[2]	
6	**Architectonics of the cerebral cortex. Dynamic localization of functions in the cerebral cortex. Analyzers 1 and 2 signal systems.[1]** Teachings about the dynamic localization of functions in the cerebral cortex. Architectonics of the cortex. The concept of "analyzer" according to Pavlov. Patterns of localization of nuclei of the II signaling system. Characteristics of the properties of centers.[2]	10
7	**Autonomic nervous system.[1]** Regularities of the structure of the autonomic nervous system. Innervation of internal organs by sympathetic plexuses. The structure of the sympathetic compartment of the ANS. Features of topography and formation of sympathetic plexuses. Features of the structure of the ANS of the parasympathetic division. Differences between the PNS and the ANS.[2]	9
8	**Sense organs: pathways from the sense organs. [1]** Organ of vision, hearing, balance, taste: structural features and functions. Auxiliary apparatus. Conductor apparatus. Developmental anomalies. Age-related changes.[2]	9
	2 semester	
1	**Features of the skull structure. Development of the skull in the pren- and postatal periods. Variations and anomalies of the skull.[1]** General patterns of the structure of the skull. Stages of skull development in phylo- and ontogenesis. Anatomy of the newborn's skull. Gender and age characteristics of the skull. Craniometric points. Anomalies, variations.[2]	12
2	**Functional anatomy of the temporomandibular joint.[1]** Development of the joint, its comparative anatomy. Features of the structure of bone and soft tissue components. Features of blood supply and innervation. Biomechanics of the TMJ. [2]	10
3	**Development of the oral cavity. Malformations of the oral cavity and face. [1]** Prenatal and postnatal development of the oral cavity. Development of the tongue and salivary glands. Features of the oral cavity of a newborn. Anomalies and malformations of the palate, tongue, salivary glands. [2]	10
4	**Comparative anatomy and embryogenesis of teeth. [1]** The concept of heterodont dental system. General patterns of dental morphology. Phylogeny of dental development. Comparative anatomy of teeth in connection with the different kind of food. Features of prenatal dental development. The process of teething. Postnatal development of teeth. [2]	10
5	**Functional anatomy of the vessels of the head and neck. [1]** Blood supply and blood outflow from the head and neck. Lymphatic vessels and nodes of the head and neck. [2]	10
6	**Anatomical basis for anesthesia on the jaws.[1]** Topography of the main branches of the trigeminal nerve. Places of exit from the skull of the main branches of the trigeminal nerve. Anatomical rationale for needle injection projections during anesthesia on the upper and lower jaws. Course of the branches of the facial nerve. Types of damage to the facial nerve and its branches. [2]	12
	Total for the discipline	**137**

[1] -Topic
[2] - essential content

Considered at the meeting of the department of Anatomy,
«24» June 2025, Protocol № 20

Head of the Department S.A. Kalashnikova