Thematic lesson plan of seminars
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

№	Thematic blocks	Hours (academic)
	1 semester	
1	**Introduction to anatomy. Axes and planes, structure of vertebrae, sternum, ribs. Skeleton parts. Axial skeleton: spinal column (structure of the vertebrae), thorax (structure of the sternum and ribs), skull (division into parts).** [1] The subject and content of anatomy. Its place among biological disciplines. The importance of anatomy for the study of clinical disciplines of medical practice. Methods of anatomical research. Axes and planes in anatomy. Lines conventionally drawn on the surface of the body, their meaning to indicate the projection of organs onto the skin. Vertebrae: their development, structure in various parts of the spine. Ribs and sternum, their structure. Definition of the skull as part of the skeleton. [2]	4
2	**Bones of upper limbs. Bones of lower limbs.** [1] Upper limb sections: shoulder girdle and free upper limb. Sections of the free upper limb: shoulder, forearm, hand. Lower limb sections: pelvic girdle and free lower limb. Sections of the free lower limb: thigh, lower leg, foot. Bones of the pelvic girdle. [2]	4
3	**General information of articular system. Joints of the axial skeleton. Joints of the upper and lower limb.** [1] Continuous bone connections. Transitional joints of bones. Discontinuous bone connections. Anatomical and biomechanical classification of joints. The main and auxiliary elements of the joint structure. Types of joint movements. Formation of physiological curves of the spinal column. Connections of the belt and the free part of the limbs. Features of the joints of the pelvic bones in the aspect of the formation of a single bone ring, functional significance. [2]	4
4	**General information of muscular system. Muscles of the back, thorax, abdomen. Diaphragm. Fasciae of the back, thorax, abdomen. Possible places of origin of the hernia**[1] General plan of the structure of the muscular system. Classification of the organs of the muscular system. The structure and topography of the muscles of the back, chest, abdomen and diaphragm. The structure and attachment points of the fascia of the back, chest, abdomen. Rectus sheath, inguinal ligament and inguinal canal. Topography of places of possible hernias (white line of the abdomen, umbilical ring, inguinal canal, diaphragm triangles, lumbar triangles). [2]	4
5	**Muscles of the upper limb. Fasciae of the upper limb. Muscles of the lower limb. Fasciae of the lower limb.** [1] Muscles of the shoulder girdle and free upper limb: their structure, topography, functions. Fascia of the shoulder girdle, shoulder, forearm, hand: their classification, structure, topographic elements. Fibrous canals of the hand. Muscles of the pelvis, thigh, lower leg, foot: their structure, topography, function. Fascia of the pelvis and free lower limb: their classification, structure, topographic elements. Bone-fibrous canals of the foot. [2]	4
6	**The hollow organs of alimentary system: the pharynx, esophagus, stomach, small, large intestine.** [1] The structure, topography and functions of the pharynx. Esophagus: topography, structure, functions. Stomach: topography, structure, function. Small intestine: its departments, differences in their topography, structure, function. Large intestine: its departments, differences in their topography, structure, function. Differences between the small and large intestine. [2]	4
7	**Pancreas, liver. Structure, topography. Peritoneum: its passage and relation to other organs**[1]	

	Pancreas: structure, function, topography, excretory duct. Liver: structure, function, topography, excretory duct, segments. Structural and functional units of the liver and pancreas. The course of the peritoneum in the transverse plane. The course of the peritoneum in the sagittal plane, differences in the topography of the pelvic organs in men and women. Canals, pockets, sinuses and depressions of the abdominal cavity. [2]	
8	**Organs of the respiratory system. Mediastinum.** [1] External nose, nasal cavity. Larynx: topography, structure. Trachea: topography, structure. Main, lobar and segmental bronchi. Lungs, their lobes, segments, lobules, know the structure of the acinus. Pleura and mediastinal organs: their structure, location and functions, age characteristics. [2]	4
9	**General information of urinary system. Urinary organs. Male genitalia. Female genitalia. Perineum.** [1] Kidneys: topography, development, structure, function. Ureters, bladder: development, structure, function. Male and female urethra. Plan of the structure of the male genital organs. Classification of the male genital organs. Male genital organs: internal and external, their structure, location and function, age characteristicsю Plan of the structure of the female reproductive system. Female genital organs: internal (ovary, fallopian tubes, uterus, vagina), their structure, location and function, age characteristics. Female genital organs: external (female genital area), their structure, location and function, age characteristics. Perineum: muscles and fascia. [2]	4
10	**General overview of the cardiovascular system. Heart. Ascending part and arch of the aorta: topography, branches.** [1] Development of the cardiovascular system. The structure of blood vessels, their location, branching patterns. Characteristics of the microvasculature. Vessels of the systemic and pulmonary circulation (general characteristics). Heart: development, topography, structure. Blood circulation of the heart. Topography and parts of the aorta. Branches of the ascending part and arch of the aorta: topography, areas of blood supply. [2]	4
11	**Descending aorta.** [1] Parietal and visceral branches of the thoracic and abdominal aorta. Features of their branching and anastomoses. Arteries of the upper and lower limbs: topography, branches, areas of blood supply, anastomoses. Arteries of the pelvis: topography, branches, areas of blood supply, anastomoses.[2]	4
12	**General overview of veins. Superior vena cava. Inferior vena cava. Portal vein. Venous anastomoses. Fetal circulation. Lymphoid system: lymphatic trunks and ducts, nodes. Organs of the immune system.** [1] Topography of the superior and inferior vena cava: sources of formation, course, adjacent organs and vessels, tributaries. Sources of formation of the azygos and semi-gypsy veins. Veins of the upper and lower limbs. Pelvic veins: topography, sources of formation, anastomoses. Portal vein, blood outflow regions, topography. Anastomoses: cavacaval, portocaval. Features of fetal blood circulation. The structure of lymphatic system. The thoracic duct, its formation, topography, options for flowing into the venous bed. The right lymphatic duct, its formation, topography, place of confluence with the venous bed. Lymph node as an organ (structure, functions). Classification of lymph nodes. Anatomy and topography of lymphatic vessels and regional lymph nodes of the extremities, chest and abdominal cavities. [2]	4
13	**General information of nervous system. Structure of spinal cord. Brain (topography, surfaces, parts). Topography of the exit of the cranial nerves (base of the brain, base of the skull).**[1] The structure of the neuron. Reflex arc (simple and complex). Spinal cord: topography, position in the spinal canal. Spinal cord: external structure, membranes, blood supply. Spinal cord: internal structure, topography of gray and white matter. The nuclei of the gray matter of the spinal cord, their purpose. Localization of the pathways in the white matter of the spinal cord. Divisions of the brain: topography. Topography of the inner base of the skull: the exit (entrance) of the cranial nerve at the base of the skull. [2]	4
14	**The rhombencephalon. Cerebellum: nuclei, connections with other parts of the central nervous system. Cavity of the rhombencephalon (IV ventricle).**[1] Parts of the rhombencephalon: topography. Macrostructure of the medulla oblongata.	4

	Topography of gray and white matter. Anatomical formations within the isthmus of the rhombencephalon. Pons: boundaries, macrostructure, topography of gray and white matter. Projection of nuclei onto the rhomboid fossa. Macrostructure of the cerebellum. Topography of gray and white matter. Cerebellar nuclei. Walls of the IV ventricle.[2]	
15	**The midbrain: macrostructure, topography grey and white matters, cavity of the midbrain. The diencephalons: macrostructure, topography grey and white matters, III ventricle.** [1] Midbrain, topography. Dorsal part, roof of the midbrain. The ventral part, the legs of the brain. Midbrain cavity, brain aqueduct. Internal structure of the midbrain, parts. Gray matter topography. Diencephalon: topography, divisions. Thalamic brain, parts. Hypothalamus, topography. III ventricle, topography, walls. [2]	4
16	**Telencephalon. Internal structure of the hemispheres (basal ganglia, commissures, lateral ventricles). External structure of the hemispheres (lobes, sulci and gyri). Cerebral cortex (structure, localization of functions). Analyzers 1 and 2 signal systems. Conducting pathways of the brain and spinal cord.**[1] Localization and structure of the basal ganglia. White matter of the cerebral hemispheres. Lateral ventricles. Hemispheres of the brain, topography of the lobes. Sulci and gyri of the surfaces of the hemispheres. The structure of the cerebral cortex. Classification of pathways of the brain and spinal cord: projection, commissural, associative pathways. Afferent (ascending) and efferent (descending) pathways.[2]	4
17	**Spinal nerves and their plexuses. General characteristics of the autonomic nervous system.**[1] Formation of spinal nerves. Their branches. Segmental distribution of spinal nerves. Plexuses of the anterior branches of the spinal nerves: formation, branches of the Central and peripheral parts of the autonomic nervous system. Parasympathetic and sympathetic parts of the autonomic nervous system. [2]	4
18	**Control of knowledge on topics of the 1st semester semester**[1] Summing up the results of the study of the topics of the 1st semester [2]	4
	2 semester	
1	**The unpaired bones of the cerebral cranium: frontal, occipital, sphenoid, ethmoid bones**[1] Defining the skull as part of the skeleton. Unpaired bones of the cerebral skull: their parts, structural details. Functional values of canals, grooves and holes in the bones of the cerebral part. [2]	4
2	**The paired bones of the cerebral cranium: parietal, temporal bones.** [1] The temporal bone: its parts, details of the structure. Temporal bone canals, inlet and outlet, their contents, functional significance. The temporal bone as the seat of the organ of hearing and balance. Parietal bone: its parts, structural details. [2]	4
3	**The bones of the facial skull.** [1] Bones of the facial skull, their position in the whole preparation, parts. Formations of the lower jaw corresponding to the attachment of the masticatory muscles. [2]	4
4	**Cranial base: internal, external. The temporal fossa, the infratemporal fossa, pterygopalatine fossa.** [1] Skull base borders. Borders and openings of the anterior, middle and posterior cranial fossa. Location of holes, canals on the outer surface of the skull base. Boundaries, contents and connections of the fossae. [2]	4
5	**The orbit. Bony nasal cavity. Bony oral cavity** [1] The eye socket, the structure of its walls, the connections of the eye socket. The nasal cavity, the structure of its walls. The nasal passages, their communications with the paranasal sinuses and other parts of the skull. Oral cavity, its bony base. The characteristics newborns skull. [2]	4
6	**Skull bone joints.** [1] Sutures of the brain and facial parts of the skull. Temporary and permanent synchondrosis of the skull. Temporomandibular joint: structure, ligaments, muscles acting on the joint.[2]	4
7	**Muscles and fasciae of the head. Topographic formations of the head.** [1] Principles of classification of the muscles of the head. The classification, structure, topography and function of the chewing muscles of the head. The structure, topography and attachment points of the fascia of the head. [2]	4

8	**Muscles and fasciae of the neck. Topographic formations of the neck.** [1] Principles of classification of the muscles of the neck. The classification, structure, topography and function of muscles of the neck. The clinical (according to V.N.Shevkunenko) and anatomical (according to PNA) classification of the fascia of the neck. The structure, topography of the triangles of the neck, the structures that delimit these topographic formations of the neck. [2]	4
9	**The oral cavity, palate, tongue, major salivary glands.** [1] The structure and function of the oral cavity: lips, vestibule of the mouth, hard and soft palate. Language (muscles of the tongue, papillae), development, structure, function. Large salivary glands: parotid, sublingual, submandibular: topography, structure, excretory ducts. [2]	4
10	**The teeth: structure, individual and group features, formulas, terms of eruptions of the deciduous and permanent teeth. Bite. Dental formulas.** [1] Teeth groups, structure, individual and group signs. Signs of tooth lateralization. Timing of teething. Features of the structure of milk teeth. Formation of bite of milk and permanent teeth. International teeth formula. [2]	4
11	**The common and external carotid arteries** [1] Brachiocephalic trunk: topography. Common carotid artery: topography, branches. External carotid artery, its topography, branches and areas supplied by them. [2]	4
12	**The internal carotid artery. The subclavian artery. The cerebral arterial circle.** [1] Internal carotid artery, topography, branches and areas supplied by them. Intersystem anastomoses of the internal carotid artery with the external carotid and vertebral arteries. Subclavian artery: topography, branches and areas supplied by them. Arteries of the brain. Large arterial (Willis) circle of the brain. Sources of blood supply to the parts of the brain. Intersystem anastomoses of the subclavian artery with the internal and external carotid arteries/ [2]	4
13	**Veins of the head and neck. Lymphatic drainage from the head and neck area.**[1] External, internal jugular veins: topography, formation, tributaries. Pterygoid venous plexus. Venous drainage from oral structures. Venous outflow from the brain: groups of veins, anastomoses. [2]	4
14	**Peripheral nervous system: anatomy and topography of the I, II, III, IV, VI cranial nerves. Olfactory organ. Visual organ. Conduction pathway of olfactory and visual impulses.** [2] Development and principles of the structure of the cranial nerves. Concept 0 pair of cranial nerves. I pair of cranial nerves: exit from the brain and skull. The olfactory tract. II pair of cranial nerves: exit from the brain and skull. The organ of vision. The optic tract. III, IV, VI pairs of cranial nerves: places of exits from the brain and skull, areas of innervation. [2]	4
15	**Anatomy and topography of the V cranial nerve, regions of innervations** [2] V pair of cranial nerves: its nuclei, trunk, branches. Trigeminal ganglion. Connection with the autonomic nodes of cranial nerves. Innervation of the maxillary and mandibular teeth. [2]	4
16	**Anatomy and topography of the VII - XII cranial nerves, regions of innervations. Auditory organ. Conduction pathways of auditory, vestibular and taste impulses.** [1] Facial nerve: topography, nuclei, innervation zone. VIII, IX pairs of cranial nerves: topography, nuclei, branches, zone of innervation. XI, XII pairs of cranial nerves: topography, branches, zone of innervation. Hearing organ, auditory, vestibular, taste pathway. [2]	4
17	**Formation of the cervical plexus (topography, branches). Autonomic innervation of the structures of the oral cavity** [1] Formation of the cervical plexus, branches, area of innervation. Sympathetic and parasympathetic innervation of head and neck structures. [2]	4
18	**Control of knowledge on topics of the 2nd semester semester**[1] Summing up the results of the study of the topics of the 2nd semester. [2]	4
	Total for the discipline	**144**

[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