Federal state budgetary educational institute of the higher education

 «Orenburg state medical university» of Ministry of Health of the Russian Federation»

**METHODOLOGICAL RECOMMENDATIONS FOR A TEACHER**

**FOR ORGANIZING THE STUDY OF THE DISCIPLINE**

**ANATOMY**

majoring in (specialty)

31.05.01 Therapy

Faculty of the foreign students

It is part of the main professional educational program of higher education *31.05.01. General Medicine, Faculty of Foreign Students* approved by the Academic Council of the Orenburg state medical university record No. 9 dated April 30th, 2021 and approved by the rector of the OrSMU of the Ministry of Health of Russia on 30.04.2021 .

Orenburg

**1. Methodological recommendations for the lecture course**

**Module 1.Bones and their connections.**

**Introductory lecture**

**Topic:** Introduction to anatomy subject. Axes and planes. Structure of trunk bones. Structure of cervical, thoracic and lumbar vertebrae, sacrum, coccyx, ribs and sternum. Classification of the joints. Basic and auxiliary elements of the synovial joint. Joints of the trunk bones.

**Purpose:** students acquire sufficient knowledge on the structure of the subject, its content and directions, the functional anatomy of the spinal column, chest to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** Introduction to the subject, explanation of the role of anatomy in the formation of general cultural and professional competencies of a specialist doctor. Brief history of the department, methods of studying anatomy, preparation for classes, rules of conduct at the department and when working with cadaver material, fundamentals of medical ethics and deontology, organization of independent work, educational literature, scientific circle, anatomical nomenclature and terminology. The vertebral column as a whole, physiological and anatomical curves. Prevention of scoliosis. The thorax as a whole and its anatomical variability. Classification of the joints. Basic and auxiliary elements of the synovial joint. Joints of the trunk bones.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №1.**

**Topic:** Bones of the shoulder girdle and free upper limb. The joints of the bones of the shoulder girdle and the free upper limb

**Purpose:** students acquire sufficient knowledge on the functional anatomy of the upper limb to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** the bones of the shoulder girdle and the free upper limb. Parts of long tubular bones (epiphysis, diaphysis, apophysis), the main formations on the bones of the shoulder girdle and upper limb, their functional significance. The types of connections between these bones, the structural features of each joint, and their function. Explain the anatomical features of the structure of each joint of the upper limb and the types of movements in them.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №2.**

**Topic:** Bones of the pelvic girdle and free lower limb. The connection of the bones of the pelvic girdle and the free lower limb. The pelvis as a whole. The size of the female pelvis.

**Purpose:** students acquire sufficient knowledge of the functional anatomy of the pelvis and the free lower limb to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** the bones of the pelvic girdle and the free lower limb. The main formations on the bones of the pelvic girdle and lower limb, their functional significance. Types (synarthrosis, diarthrosis, hemiarthrosis) of pelvic bone connections, knowledge of the size of the large and small pelvis. Types of connections between the bones of the free lower limb, the structure of each joint, their function. Explain the anatomical features of the structure of each joint of the lower limb and the types of movements in them. To lay the foundations of clinical thinking in understanding the issues of fetal movement along the longitudinal axis of the pelvis.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

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**Lecture №3.**

**Topic:** Introduction to the craniology. Cranial skull bones. Exit places of the cranial nerves. Facial skull bones. Individual and specific features of a skull. Temporal-and-mandibular joint.

**Purpose:** students acquire sufficient knowledge of functional anatomy of the skull to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** Features of the anatomical structure of the bones of the brain and facial skull, clinical significance. The concept of prognathia and orthognathia. The anterior corner. Gender differences of the skull. Cranial index. Individual skull shapes. Craniometry. Applied value**.**

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Module 2 Myology**

**Lecture №1**

**Topic:** Introduction into the myology. Classification of the muscles.

**Purpose:** students acquire sufficient knowledge on the structure and development of muscles to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** Muscle functions. Types of muscle tissue. Features of the anatomical structure of the muscles. Mion. Classification of muscles. Sources of muscle development. Myotom. The concept of autochthonous, truncopetal and truncofugal musсles.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №2**

**Topic:** The muscles topography. Topography of the upper limb. The synovial sheaths. Topography of pelvis and lower limb. Topography of neck and abdomen. Inguinal canal. Femoral canal.

**Purpose:** to acquire sufficient knowledge of the topography of skeletal muscles, the main channels, pits and furrows, as well as the anatomy of the weak points of the abdominal cavity to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The concept of muscle topography. Axillary fossa, furrows and channels of the upper limb. Bone-fibrous and fibrous channels. The structure of the tendon sheaths. Synovial sheaths of the tendons of the hand. Clinical significance. The concept of hernias. The components of a hernia. Weak points of the diaphragm. Weak points of the anterolateral abdominal wall. White belly line. The umbilical ring. Semicircular and semilunar lines. Inguinal canal-walls, rings, contents. The concept of oblique and straight inguinal hernias. Femoral canal. The space under the inguinal ligament, the channels of the lower limb.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Module 3. Splanchnology**

**Lecture №1.**

**Topic:** Introduction into the splanchnology. Introduction to the respiratory system. Pleura. Mediastinum

**Purpose:** students acquire sufficient knowledge on the form and structure of the respiratory system, the stages of the respiratory process of the body to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture: t**he classification of the respiratory system is presented. The concept of the upper and lower respiratory tract, bronchial and alveolar tree is given. The functions of the respiratory system are presented. Data on the development of the larynx, trachea, lungs are given. The features of the formation of the pleural cavity and diaphragm are considered. Upper and lower respiratory tract abnormalities. The concept of mediastinum

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №2.**

**Topic:** Anatomic and functional characteristic of the blood circulation circles. Anatomic and functional characteristic of the heart. Pericardium. Mediastinum. Fetal blood circulation.

**Purpose:** students acquire sufficient knowledge on the structure of the heart to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice**.**

**Abstract of the lecture:** The anatomy of the heart, its topography, the conducting system of the heart, the projection of the valves, the listening points of the heart valves are considered. Arteries and veins of the heart. X-ray image of the heart. Contours and arcs of the heart shadow.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №3.**

**Topic:** Introduction into the digestive system. Anatomy of the oral cavity organs, pharynx, esophagus, stomach.

**Purpose:** students acquire sufficient knowledge on the structure of the digestive system to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The concept of the soma and viscera is given. Classification of the digestive system. The concept of parenchymal and hollow organs. The functions of the digestive system departments are considered. The concept of shells and layers of the wall of a hollow organ. Features of the structure of the mucous, muscle, and outer membranes. The lymphoid apparatus of the gastrointestinal tract. The concept of serous membranes. Types of peritoneal covering of organs. X-ray anatomy of the oral cavity, esophagus, stomach, small and large intestine, extrahepatic bile ducts.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №4.**

**Topic:** Anatomical and functional characteristics of the large glands of the digestive system, extrahepatic bile ducts, and intestines. Peritoneum

**Purpose:** students acquire sufficient knowledge on the structure of the digestive system, as well as the peritoneum to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** Features of the structure of the mucosa, muscle, and outer membranes. The lymphoid apparatus of the gastrointestinal tract. The concept of serous membranes. Types of peritoneal covering of organs. X-ray anatomy of the oral cavity, esophagus, stomach, small and large intestine, extrahepatic bile ducts.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №5.**

**Topic:** Anatomical and functional characteristics of the urinary system.

**Purpose:** to acquire sufficient knowledge of the shape and structure of the urinary system, the topography of their organs and radiological research methods to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The anatomy and topography of the organs of the urinary system-kidneys, ureters, bladder, female urethra-are considered.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №6.**

**Topic:** Anatomical and functional characteristics of the female reproductive system. The perineum.

**Purpose:** to acquire sufficient knowledge of the shape and structure of the female reproductive systems, the topography of its organs and radiological research methods to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The anatomy and topography of the organs of the female reproductive system. A detailed description of the female reproductive system, cellular spaces and fascia of the pelvis, perineum is given.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №7.**

**Topic:** Anatomical and functional characteristics of the male reproductive system.

**Purpose:** students acquire sufficient knowledge on the shape and structure of the male reproductive system, topography of organs and radiological research methods to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The anatomy and topography of the organs of the male reproductive system are considered. A detailed description of the male reproductive system, cellular spaces and fascia of the pelvis, perineum is given

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №8.**

**Topic:** Anatomic and functional characteristic of the lymphoid system. Central and peripheral organs of the lymphoid system, their function. Anatomic and functional characteristic of the endocrine apparatus, its classification and function.

**Purpose:** students acquire sufficient knowledge on the structural organization and development of the lymphoid and endocrine systems to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The classification of primary and secondary organs of the lymphoid system is given. Lymphoid tissue and its derivatives – red bone marrow, thymus (anatomy and development, abnormalities), single and group lymphoid follicles, diffuse lymphoid tissue, vermiform process, tonsils, lymph nodes-are considered. The concepts of the spleen-anatomy, topography, development, anomalies-are given.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Module 4. Anatomy of the arterial, venous, lymphatic systems.**

**Lecture №1.**

**Topic:** Anatomical and functional characteristic of the arterial channel. Main systems of the arteries. Concept about collateral blood circulation, the anastomoses and the haemomicrocircular channel.

**Purpose:** students acquire sufficient knowledge on the structural organization of the arterial channel to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** Collateral circulation is considered – definitions of the concept, types of collaterals. Inter-and intra-system anastomoses. Anatomical and functional characteristics of its links. The types of capillaries are explained. Arteriolo-venular anastomoses. The concept of the "miracle network" and their varieties. The doctrine of the microcirculatory channel.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №2.**

**Topic:** Anatomical and functional characteristic of the venous channel. Main systems of the veins. Fetal circulation. Cavacaval anastomoses and cava-portal anastomoses and their clinical significance.

**Purpose:** students acquire sufficient knowledge on the structural organization and development of the venous channel to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The features of the structure of the veins are given. Classification of wines. Analysis of the characteristics of the most important intervenous caval and portocaval anastomoses, clinical significance

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №3**

**Topic:** Anatomical and functional characteristics of the lymphatic system and its structural elements. Outflow of lymph from the organs.

**Purpuse:** students acquire sufficient knowledge on the structural organization and development of the lymphatic bed to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The anatomical and functional characteristics of lymphatic capillaries and postcapillaries, intra-and extra-organ lymphatic vessels, lymphatic trunks and ducts are considered. Lymph nodes. The outflow of lymph from the organs is explained.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Module5. Central nervous system and sensory organs.**

**Lecture №1**

**Topic:** Introduction to neurology. The concept of the somatic and vegetative departments. Neurons and neuroglia, reflex arc. Spinal cord, external and internal structure. Meninges and intermeningeal spaces of a spinal cord. Reflex arches of somatic and autonomic reflexes.

**Purpuse:** students acquire sufficient knowledge on the morphological structure of the nervous system, spinal cord and its membranes to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The relevance of the topic is explained. The role of the nervous system in the coordination of the processes of adaptation of the body to the conditions of the external and internal environment and the regulation of homeostasis of the body. Classification of the nervous system by topographical and functional characteristics. Somatic and vegetative parts of the nervous system. Neurons and neuroglia. Overview of glia cell types and their function. A neuron. The classification of neurons is considered. Characteristics of the processes of the neuron. Nerve endings – receptors, synapses, effectors. The concepts of the gray and white matter of the central nervous system, nuclei, and ganglia are given. Spinal cord, external and internal structure. The membranes of the spinal cord

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №2**

**Topic:** The brain stem. Reticular formation.

**Purpose:** students acquire sufficient knowledge on the structure of the brain stem and reticular formation to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The concept of the brain stem as an anatomical structure and segmental apparatus of the brain. The functions of the brain stem are given. Anatomical parts of the trunk. Specific and non-specific stem nuclei. Projection of nuclei on the bottom of the rhomboid fossa and patterns of their localization. The concept of reticular formation, localization in the central nervous system. Function of the nuclei of the reticular formation. Seeing the connections of the reticular formation with other parts of the central nervous system.
**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №3**

**Topic:** Functional anatomy of the gray and white matter of the telencephalon. The limbic system. Central nervous system pathways (commissural, projection, and associative). Extrapyramidal system.

**Purpose:** to acquire sufficient knowledge of the functional anatomy of the gray and white matter of the telencephalon, the limbic system, the conducting pathways, and the extrapyramidal system to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The components of the forebrain are given. Cortical centers of the I and II signal system. Characteristics of basal nuclei, their anatomy and function. The olfactory brain. The limbic system. Associative, commissural, and projection fibers of the white matter. Capsules of white matter. Extrapyramidal system – centers, paths, function.

**Form of organization of the lecture**: traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Module6. Anatomy of the peripheral and autonomic nervous systems.**

**Lecture № 1**

**Topic:** Introduction to the peripheral nervous system. Anatomical and functional characteristics of the cranial nerves.

**Purpose:** students acquire sufficient knowledge on the structural organization of the peripheral nervous system and the anatomy and development of cranial nerves to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** The classification of cranial nerves by their conductor composition and origin is given. Rules for the addition of the cranial nerve. Nuclei, conductor composition, places of exit from the brain and skull, main branches and innervation zones of I-XII pairs of cranial nerves.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №2.**

**Topic:** The autonomic nervous system. General data on the autonomic nervous system (departments, higher autonomic centers, the object of innervation, reflex arc). Connections of the VNS with the somatic NS. Vegetative plexuses. Regularities of innervation of internal organs.

**Purpose:** students acquire sufficient knowledge on the structural organization of the autonomic nervous system to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** the role of the nervous system in the coordination of the processes of adaptation of the body to the conditions of the external and internal environment and the regulation of homeostasis of the body is described. The classification of the nervous system by topographical and functional features is given. The division of the nervous system into somatic and vegetative divisions is presented. The concept of the working organ, neuron and neuroglia is given. An overview of the types of glial cells and their function is presented. The concept of a neuron, their classification of neurons is given. The characteristics of neuron processes and nerve endings-receptors, synapses, effectors-are described. The concepts of the gray and white matter of the central nervous system, nuclei, and ganglia are considered.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №3.**

**Topic:** Spinal nerves anatomy. Structure and formation of the spinal nerve. Structure of the branches. Formation of the somatic plexuses. Anatomy of the brachial, lumbar and sacral plexuses (formation, main branches, topography and zone of the innervation).

**Purpose:** students acquire sufficient knowledge on the structural organization, topography and development of spinal nerves to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** somatic and autonomic reflexes of the nervous system are presented. The topography of the spinal cord and its membranes is described. The concept of a segment of the spinal cord, its anterior and posterior roots, and spinal ganglia is given. The topography of the gray matter of the spinal cord is described. The concept of columns and horns of gray matter is given. The functional composition of the posterior, anterior, and lateral horns of the spinal cord and the topography of the white matter of the spinal cord are considered. The concept of the white matter ropes and the functional composition of the posterior, anterior and lateral spinal cord ropes are given. The intersegmental apparatus of the spinal cord, the reflex as the basis of the activity of the nervous system, and the reflex arc as the morphological basis of the reflex are considered. Conditional and unconditional reflexes, the structure of the arc of somatic and vegetative reflexes, simple and complex reflex arcs are described.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №4.**

**Topic:** Early stages of the embryogenesis. Differentiation of the branchiate apparatus. Development of the main systems of the internal organs. Anomalies of the development.

**Purpose:** students acquire sufficient knowledge on the issues of human organ embryogenesis to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** Early stages of embryogenesis. The main sources of development. Differentiation of the branchiate apparatus. Development of the main systems of the internal organs. Anomalies of the development.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**Lecture №5.**

**Topic:** Development of the heart and CNS.

**Purpose:** students acquire sufficient knowledge on the issues of human organ embryogenesis to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of clinical practice.

**Abstract of the lecture:** Development of the heart and CNS. The main sources of development. Ontogenesis of the nervous system, anomalies. Ontogenesis of the heart, anomalies.

**Form of organization of the lecture:** traditional, thematic lecture.

**Methods used in the lecture:** story-talk, drawing diagrams, slide shows, tables.

Training tools:

**- didactic:** tables, diagrams, drawings, slides.

**- material and technical:** chalk, blackboard, multimedia projector.

**2. Methodological recommendations for the practical classes**

**Module 1. Bones and their connections.**

**Practical lesson №1.**

**Topic:** Introduction into human anatomy. Conversation on the topic: Axes and planes (CIW -1h).

**Aim:** give the concept of anatomy as a science that forms the foundation of medicine. To acquaint students with the Department of Anatomy, the specifics of work on it. Students should learn the Latin terms most commonly found in anatomy. The ability to distinguish between individual axes and planes drawn through certain areas of the trunk and limbs.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

|  |  |
| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson:**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №2.**

**Topic:** General characteristics of vertebrae. Structure of cervical , thoracic, lumbar vertebae, sacrum, coccyx, ribs and sternum

**Aim:** Students should be able to distinguish between vertebrae of different parts of the spinal column, show the parts of the vertebrae and the formations on them, and name them in Russian and Latin. Be able to distinguish the I,XI, XII ribs from the rest, know the structure of the ribs and sternum. Have an idea of the types of bone connections, the structure of the joint, the types of movements in them along the axes.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

|  |  |
| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson:**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 3.**

**Topic:** Bony joints.Classification of the joints.basic and axiliary elements of the synovial joint.joints of the trunk bones.
**Aim:** students should know the types of connections between the bones, the structure of the joint, the types of joints and the movements in them along the axes. Be able to demonstrate the types of continuous joints and joints using examples of rib-vertebral joints and vertebrae. Know the features of the connection of the skull with the spine. Have an idea of the structure of the vertebral column and the chest as a whole. Get the skills of dissecting joints.
**Form of organization of the class:**practical lesson

**The plan of the practical lesson:**

|  |  |
| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

 **Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, , multimedia projector, laptop.

**Practical lesson № 4.**

**Topic:** Bones of a shoulder girdle and free upper limb. Joints of the upper limb bones.

**Aim:** learn to distinguish between the bones of the shoulder girdle and the free upper limb. Students should know the parts of the long tubular bones (epiphysis, diaphysis, apophysis), the main formations on the bones of the shoulder girdle and upper limb, and their functional significance. Know the types of connections between these bones, the features of the structure of each joint, their function. Get the skills of dissecting joints. To make students understand that the connection of the bones of the shoulder girdle and the upper limb is carried out using the main types of bone connection. Explain the anatomical features of the structure of each joint of the upper limb and the types of movements in them. To instill in students the skills of joint dissection.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 5.**

**Topic:** Bones of a pelvic girdle and free lower limb.

**Aim:** to gain students ' understanding of the anatomical and functional features of the pelvic girdle area: knowledge of the Latin terminology of all pelvic formations; the morphology of the pelvic bones, the types of connection of the pelvic bones; the size of the large and small pelvis. To achieve students ' knowledge of the departments and features of the structure of each pelvic bone, free orientation in the location of the right and left bones, the concept of anatomical and functional features of the male and female pelvis.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- - Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

 **Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 6.**

**Topic:** Joints of the pelvic girdle. The pelvis as a whole, sizes of the fe-male pelvis. Joints of the lower limb bones

**Aim:** The concept of anatomical and functional features of the male and female pelvis. Knowledge of all types (synarthrosis, diarthrosis, hemiarthrosis) of pelvic bone connections, knowledge of the size of the large and small pelvis. To lay the foundations of clinical thinking in understanding the issues of fetal movement along the longitudinal axis of the pelvis. To instill in students the basic skills of dissecting the joints and ligamentous apparatus of the pelvis. Teach students to distinguish between the bones of the free lower limb. Know the main anatomical formations on the bones of the lower limb, their functional significance. To study the structure of the joints of the lower limb: hip, knee, ankle, foot joints. Know the features of the structure, the axes of movement and the types of movement of each joint. Be able to show the articular surfaces, ligaments, and auxiliary elements of the joints on the preparations. Have an idea of the significance of operations on the "Chopar" and "Lisfranc" joints, the formation of the arches of the foot. Instill the skills of dissecting the joints of the lower extremity.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- - Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

 **Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 7.**

**Topic:** Introduction into the craniology. Bones of the neurocranium.

**Aim:** to gain students ' knowledge of Latin terminology and morphological structure of each bone of the cerebral skull and its parts, the ability to freely navigate the location of paired bones, the ability to read radiograms of the skull.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

 **Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 8**

**Topic:** Viscerocranium. Temporomandibular joint. Conversation on the topic: Individual and specific features of the skull (CIW -1h).

**Aim:** to gain students ' understanding of the anatomical and functional features of the bones of the facial skull, knowledge of the Latin terminology and morphological structure of each bone, the ability to read radiographs of the facial skull and determine the position of the main air-bearing sinuses, the features of the structure of the skull of a newborn, the time of closure of springs. To get students to understand the anatomical and functional features of the types of joints of the skull bones; to conduct craniometric studies. To instill in students the basic skills of preparing the mandibular joint.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- - Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

 **Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 9**

**Topic:** Skull topography. Orbit, nasal cavity, temporary fossa, pterygopalatine fossa

**Aim:** to gain students ' understanding of the anatomical and functional features of the skull as a whole: knowledge of the Latin terminology of all the formations of the skull, the morphology of the anterior, middle, and posterior fossa of the inner base of the skull, the nasal cavity, the eye socket, the temporal, sub-temporal, and pterygopalatine fossa. The ability to freely navigate the natural preparation of the skull and show all the walls and communications of these cavities.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- - Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

 **Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 10.**

**Topic: "Bones and their connections" module. The final lesson.**
**Aim:** checking the level of knowledge of students on the lecture, theoretical material and preparations of the module "Bones and their connections**"**
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS).- Testing in the IS (test tasks are presented in the FOS).- Description of macro (micro) preparations (a list of questions for demonstrating macro-preparations are presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Module 2. Myology**

**Practical lesson № 1.**

**Topic:** Musces of the neck. Masticatory and facial expression muscles. Fasciae of the head and neck. Topography of the neck.
**Aim:** students acquire sufficient knowledge on the anatomical and functional features of the head, neck and trunk, the features of the course and topography of the facial and masticatory muscles, their relationship with the fascia of the head, the course and topography of the neck muscles; their relationship with the fascia; the formation of closed and unclosed interfacial and cellular spaces and their communications with the anterior and posterior mediastinum. Students should know the origin and attachment of the back muscles, their function, topography, fascia. Teach students the basic skills of dissecting the muscles of the head, neck and trunk.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 2.**

**Topic:** Back muscles. Chest and abdominal muscles. Inguinal canal. Diaphragm

**Aim:** students acquire sufficient knowledge of the classification of the chest and abdominal muscles; the points of origin, attachment, and function of each muscle or muscle group; and the parts and contents of the orifices of the diaphragm. To gain students 'knowledge of the anatomical and functional features of the abdominal area: the course of the broad abdominal muscles, their relationship with the rectus muscles, participation in the formation of abdominal weaknesses; understanding of the clinical significance of" weak points " in the abdominal wall, especially the inguinal canal. To instill in students the skills of dissecting the muscles, fascia of the chest and abdomen, as well as the important topographic formations located here.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 3.**

**Topic:** Muscles and topography of the upper limb.
**Aim:** students acquire sufficient knowledge of the classification of the upper limb muscles; the points of origin, attachment, and function of each muscle or muscle group. To instill in students the skills of dissecting the muscles, fascia of the upper limb, as well as the important topographic formations located here
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 4.**

**Topic:** Muscles of the pelvis and lower limb

**Aim:** students acquire sufficient knowledge of the structure and function of the muscles of the pelvis, thigh, lower leg and foot; the structure of the fascia on the lower limb and their derivatives: intermuscular septa, synovial sheaths of tendons, tendon retainers of fibrous and bone-fibrous channels; topography of the hip area, hip, lower leg and foot. To instill in students the skills of dissecting the muscles and fascia of the lower extremity.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 5.**

**Topic:** Topography of the pelvis and lower limb

**Aim:** students acquire sufficient knowledge of the structure and function of the muscles of the pelvis, thigh, lower leg and foot; the structure of the fascia on the lower limb and their derivatives: intermuscular septa, synovial sheaths of tendons, tendon retainers of fibrous and bone-fibrous channels; topography of the hip area, hip, lower leg and foot. To instill in students the skills of dissecting the muscles and fascia of the lower extremity.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 6.**

**Topic:** "Myology" module. The final lesson.
 **Aim:** checking the level of knowledge of students on the lecture, theoretical material and preparations of the module "The muscles anatomy".

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS).- Testing in the IS (test tasks are presented in the FOS).- Description of macro (micro) preparations (a list of questions for demonstrating macro-preparations are presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

 **Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Module 3. Splanchnology**

**Practical lesson №1**

**Topic:** Introduction into splanchnology.Review of the respiratory system organs. Nasal cavity. Larynx. Trachea.

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the nasal cavity, larynx, trachea to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.

**Form of organization of the class:** practical lesson.

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

 **Practical lesson №2**

**Topic:** Lungs. The bronchial and alveolar tree. Anatomy of the pleura and mediastinum. Conversation on the topic: Topography of the pleura and lungs (CIW -1h).

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the lungs and pleura to achieve the ability to use the acquired knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №3**

**Topic:** Vessels of a greater (systemic) and lesser (pulmonary) circles of the blood circulation. External and internal structure of a heart. The heart blood supply.

**Aim:** students acquire sufficient knowledge of the anatomy and topography of the heart to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №14**

**Topic:** The heart topography (borders and places of listening of valves). Pericardium. Mediastinum. Conversation on the topic: The fetal blood circulation (CIW -1h)

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the blood vessels of the heart, pericardium and mediastinum and the mechanisms of fetal circulation to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

 **Practical lesson №5**

**Topic:** Review of the digestive system organs. Mouth, oral cavity, major salivary glands, teeth, tongue, pharynx, soft palate

**Aim:** students acquire sufficient knowledge of the anatomy and topography of the oral cavity, salivary glands, teeth, pharynx, soft palate, to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of professional orientation.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

 **Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №6**

**Topic:** Anatomy of the esophagus, stomach. Small and large intestine

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the esophagus, stomach, small and large intestine, to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №7**

**Topic:** Liver. Pancreas. Spleen. Bile ducts.

Topography of the digestive system organs. Regions of an anterior abdomen wall.

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the abdominal cavity and peritoneum to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №8**

**Topic:** Peritoneum (course, types of a covering of organs and derivatives.

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the abdominal cavity and peritoneum to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson:**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №9**

**Topic:** **"The splanchnology.** **Part I. The final lesson.**
**Aim:** checking the level of knowledge of students on lecture, theoretical material and preparations "Splanchnology" module.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **Основная часть учебного занятия:****The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS).- Testing in the IS (test tasks are presented in the FOS).- Description of macro (micro) preparations (a list of questions for demonstrating macro-preparations are presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

 **Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №10**

**Topic:** Anatomy of the urinary system organs. Adrenal glands. Retroperitoneal space.

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the organs of the urinary system and retroperitoneal space to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic.  |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №11**

**Topic:** Anatomy of the female genital system. Cellular spaces and fasciae of a lesser pelvic. Perineum. Conversation on the topic: The menstrual cycle (CIW – 1h)

 **Aim:** students acquire sufficient knowledge on the anatomy and topography of the female reproductive system, cellular spaces and fascia of the pelvis, perineum to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №12**

**Topic:** Anatomy of the male genital system.

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the organs of the male reproductive system to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №13**

**Topic:** Anatomy of the endocrine system

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the organs of the endocrine system to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №14**

**Topic:** Anatomy of lymphoid system.

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the organs of the lymphoid system to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson:**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №15**

**Topic:** **"The splanchnology.** **Part II. The final lesson.**
**Aim:** checking the level of knowledge of students on lecture, theoretical material and preparations "Splanchnology" module.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **Основная часть учебного занятия:****The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS).- Testing in the IS (test tasks are presented in the FOS).- Description of macro (micro) preparations (a list of questions for demonstrating macro-preparations are presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

 **Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Module 4. Anatomy of the arterial, venous, lymphatic systems.**

**Practical lesson №1**

**Topic:** Aorta. Branches of the aortic arch (external and internal carotid, subclavian arteries): to-pography, branches, the area of blood sup-ply. Thoracic aorta». Conversation on the topic: Blood supply of the brain and spinal cord (CIW -1h).

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the branches of the aortic arch to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №2**

**Topic:** Arteries of the shoulder girdle and upper limbs: topography, branches, the area of blood supply. Collateral blood supply of the upper limbs. Blood supply of the main joints of the upper limbs

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the arteries of the shoulder girdle and free upper limb to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of professional orientation.

**Form of organization of the class:** practical lesson.

**The plan of the practical lesson:**

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| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №3**

**Topic:** External iliac artery. Arteries of the pelvic girdle and lower limbs: topography, branches, the area of blood supply. Collateral blood supply of the lower limbs. Blood supply of the main joints of the lower limbs.

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the external iliac artery, arterial vessels of the free lower limb, their branches and anastomoses to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical professional problems.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №4**

**Topic:** Abdominal aorta (topography, branches, the area of blood supply). Blood supply and arterial anastomoses of the internal organs. Internal iliac artery (topography, branches, the area of blood supply).

**Aim:** students acquire sufficient knowledge of the anatomy and topography of the abdominal aorta and internal iliac artery, their branches and anastomoses to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical professional problems.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №5**

**Topic:** Venous system. Superior vein cava and Inferior vein cava (formation, topography, tributaries and sources.
**Aim:** students acquire sufficient knowledge on the anatomy and topography of the venous system to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №6**

**Topic:** Cava-caval and porto-caval anastomoses. Venous blood outflow from the head and neck organs
**Aim:** students acquire sufficient knowledge on the anatomy and topography of the venous system to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 7**

**Topic:** The lymphatic system». Conducting a conversation on the topic: Lymph outflow from the organs (CIW -1h)

**Aim:** students acquire sufficient knowledge of the anatomy and topography of the lymphatic, immune and endocrine systems to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, cadascope, multimedia projector, negatoscopes, laptop.

**Practical lesson № 8**

**Topic:** **“The anatomy of arterial, venous, lymphatic systems". The final lesson.**

**Aim:** checking the level of students' knowledge on lecture, theoretical material and preparations of the arterial, venous, lymphatic systems.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS).- Testing in the IS (test tasks are presented in the FOS).- Description of macro (micro) preparations (a list of questions for demonstrating macro-preparations are presented in the FOS) |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Module 5. Central nervous system and sensory organs**

**Practical lesson №1.**

**Topic:** Introduction into CNS. Spinal cord (external and internal structure). Reflex arches of somat-ic and autonomic re-flexes». Conducting a conversation on the top-ic: Meninges and inter-meningeal spaces of a spinal cord (CIW -1h).

**Aim:** To gain students ' understanding of the anatomical and functional features of the spinal cord and its membranes: knowledge of the Latin terminology and morphological structure of all spinal cord formations on natural preparations, a clear representation of the internal structure and free orientation in the schemes of spinal cord sections.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №2**

**Topic:** The hindbrain (bulb, pons, cerebellum): external and internal structure. The fourth ventricle. Topography of cranial nerves nucleus (projection of cranial nerves nuclei to a rhomboid fossa)

**Aim:** To gain students' understanding of the anatomical and functional features of the brain: knowledge of Latin terminology and the location of all formations on the macropreparation of the brain stem and diagrams of the structures of the rhombencephalon.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 3**

**Topic:** Midbrain. Brain isthmus. Reticular formation. Diencephalon. The third ventricle. Brain trunk.
**Aim:** To obtain from students an understanding of the anatomical and functional features of the midbrain and diencephalon, knowledge of the Latin terminology and morphological structure of all formations of the midbrain and diencephalon on natural preparations, a clear representation of the internal structure of the brain stem and free orientation in the schemes of brain sections.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 4**

**Topic:** External and internal structure of a cerebrum (telencephalon). Lateral ventricles. Localization of the cortical ends of analyzers. Olfactory brain. Limbic system. Cranial meninges. Cerebrospinal fluid circulation.
**Aim:** To gain students' understanding of the anatomical and functional features of the and telencephalon, knowledge of the Latin terminology and morphological structure of all end-brain formations based on natural preparations, free orientation in telencephalon cross-section diagrams, and a clear understanding of signaling systems, analyzers, and CSF circulation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 5**

**Topic:** Tracts. Voluntary and involuntary sensory tracts. Voluntary motor tracts. Extrapyramidal system.
**Aim:** To gain students ' understanding of the anatomical and functional features of the spinal cord and brain, knowledge of Latin terminology, functional characteristics and morphological structure of all the central nervous system pathways.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 6**

**Topic:** Structure of the organ of hearing and balance. Auditory tract. Structure of the vision organ and its accessory structures. Visual tract. Eyeball section. Organ of smell, olfactory tract.

**Aim:** Students should know the structure of the organ of hearing, balance, be able to show their departments on preparations and models, know the features of the structure of each department, and understand their functions. Be able to explain and show on the tables all the departments of the pathways of the auditory, statokinetic apparatus. To gain students ' knowledge of the structure of the organ of smell and visual organ: the eyeball, its membranes and the nucleus of the eye, as well as the auxiliary apparatus of the eye; the ability to show the components of the eye on the moulage and prepared eyeball, understanding and ability to explain the participation of various parts of the eye in the accommodation, production and circulation of watery moisture. Be able to show the components of the visual analyzer and olfactory apparatus on the tables and brain preparations. Know the ways to remove tear fluid.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №7.**

**Topic:** **"The anatomy of the central nervous system and sense organs" module. The final lesson.**
**Aim:** testing the level of knowledge of students on lecture, theoretical material and preparations on the anatomy of the central nervous system and sense organs.

**Form of organization of the class:** practical lesson
**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS).- Testing in the IS (test tasks are presented in the FOS).- Description of macro (micro) preparations (a list of questions for demonstrating macro-preparations are presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Module 6. Anatomy of the peripheral and autonomic nervous systems**

**Practical lesson №1**

**Topic** I - VI pairs of the cranial nerves (nuclea, conduction structure, exit places from a brain and from a skull, branches and zone of their innervation). Arch of the pupillary reflex.

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the I - VI pairs of cranial nerves to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №2**

**Topic:** VII - XII pairs of the Cranial Nerves (nuclea, conduction structure, exit places from a brain and from a skull, branches and zone of their innervation).

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the VII-XII pairs of cranial nerves to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.

**Form of organization of the class:** practical lesson
**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №3**

**Topic:** The autonomic nervous system. The parasympathetic part. The sympathetic part. The somatic and autonomic nervous arches.

**Aim:** students acquire sufficient knowledge of the anatomy and topography of the autonomic nervous system to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| № | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson №4**

**Topic:** Innervation of organs. Formation of the spinal nerves. Cervical plexus (branches, topography and zone of the innervation). Conducting a conversation on the topic: The autonomic plexuses (CIW- 1h).

**Aim:** students acquire sufficient knowledge of the anatomy and topography of the autonomic nervous system to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of a professional orientation.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| № | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 5**

**Topic:** Thoracic spinal nerves. Brachial plexus (branches, topography and zone of the innervation).
**Aim:** students acquire sufficient knowledge on the formation of spinal nerves, anatomy and topography of the brachial plexus and thoracic spinal nerves to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical problems of professional orientation.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 6**

**Topic:** Lumbar plexus, sacral and coccygeal plexus (branches, topography and zone of the innervation).

**Aim:** students acquire sufficient knowledge on the anatomy and topography of the lumbar, sacral and coccygeal plexuses to achieve the ability to use the knowledge in the study of other fundamental and clinical disciplines, as well as in solving practical professional problems.

**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS)- Performing tasks to test practical skills (the list of tasks is presented in the FOS).- Description of macro (micro) preparations (the list of questions for demonstration of macro-preparations is presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

- material and technical - chalk, plasticine, colored pencils, blackboard, multimedia projector, laptop.

**Practical lesson № 7**

**Topic:** **"The Peripheral and autonomic nervous systems” module. The final lesson.**
**Aim:** testing the level of knowledge of students on lecture and theoretical material on the anatomy of the cranial nerves and the autonomic nervous system.
**Form of organization of the class:** practical lesson

**The plan of the practical lesson:**

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| --- | --- |
| №  | Stages and content of the lesson |
| 1 | **Organizational moment:** Checking attendance, finding out the reasons for the absence of students in the practical lesson.Announcement of the topic, the purpose of the lesson.Motivational moment. Discussion of questions raised by students |
| 2 | **The main part of the practical lesson::**- Survey on the topic (Questions for the oral survey are presented in the FOS).- Testing in the IS (test tasks are presented in the FOS).- Description of macro (micro) preparations (a list of questions for demonstrating macro-preparations are presented in the FOS)- Explanation of the new material through the demonstration of anatomical preparations and the disclosure of the main elements of the next topic. |
| 3 | **The final part of the lesson:**Summing up the lesson resultsSubmitting current marks to the training journal |

**Training tools:**

- didactic-educational tables, diagrams, posters, bone preparations, wet preparations, models, museum preparations, a stand on age-related anatomy, Latin and Greek terminology (stand), electrified educational stands.

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