ЛД-21ИН

FEDERAL STATE BUDGET EDUCATIONAL INSTITUTION OF HIGHER EDUCATION
"NORTH OSSETIAN STATE MEDICAL ACADEMY"
OF THE MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

ДОКУМЕНТ ПОДПИСАН ЭЛЕКТРОННОЙ ПОДПИСЬЮ

Сертификат: 2D4EFF8215A48D63793F851FADB089F4
Владелец: Ремизов Олег Валерьевич
Действителен: с 23.05.2023 до 15.08.2024

APPROVED
Rector of the FSBEI of HE NOSMA of the Ministry of Health of Russia
_____ O. V. Remizov
May, 24, 2023

THE WORKING PROGRAM OF THE DISCIPLINE

ANATOMY

the main professional educational program of higher education - specialty program in the specialty 31.05.01 General medicine,
(Educational program, partially implemented in English)
approved on May, 24, 2023

Form of Education **Full-time**

The Duration of mastering the basic professional educational program 6 years

The Department of Human Anatomy with Topographic Anatomy and Operative Surgery

Vladikavkaz, 2023

In the development of working program it is based on:

1. Federal State Educational Standard of Higher Education in the specialty 31.05.01 **General medicine** approved by the Ministry of Education and Science of the Russian Federation **of August 12, 2020 No. 988**

2. Curriculum for specialty **31.05.01 General medicine** (Educational program, partially implemented in English)
(ЛД-21-03-23ИН), approved by the Academic Council of the Federal State Budget Educational Institution of Higher Education "NORTH OSSETIAN STATE MEDICAL ACADEMY" of the Ministry of Health of the Russian Federation of the 24 of May 2023, protocol № 8.

The working program of the discipline was approved at the conference of the Department of Human Anatomy with Topographic Anatomy and Operative Surgery of the 18 of May 2023, protocol №10.

The working program of the discipline was approved at the meeting of the Central Coordination Educational and Methodical Council of the 23 of May 2023, protocol №5

The working program of the discipline was approved by the Academic Council of the Federal State Budget Educational Institution of Higher Education "NORTH OSSETIAN STATE MEDICAL ACADEMY" of the Ministry of Health of the Russian Federation of the 24 of May 2023, protocol №8.

Program developer:

Head of the Department of Human Anatomy with Topographic Anatomy and Operative Surgery of the Federal State Budget Educational Institution of Higher Education "NORTH OSSETIAN STATE MEDICAL ACADEMY" of the Ministry of Health of the Russian Federation, Associate Professor _____ O. N. Totoeva

Reviewers:

Bibaeva L.V. — Head of the Department of Biology and Histology of the Federal State Budget Educational Institution of Higher Education "NORTH OSSETIAN STATE MEDICAL ACADEMY" of the Ministry of Health of the Russian Federation, Prof. Dr. med.

Butaev A.K. — Chief Physician of the Federal Budgetary Institution of Health "Center for Hygiene and Epidemiology in the Republic of North Ossetia - Alania"

The contents of the work program

1. Name of discipline;
2. A list of intended learning outcomes for the discipline associated with the planned results of educational programs;
3. The indication of the place of discipline in the structure of the educational program;
4. The amount of discipline in credit units indicating the number of academic or astronomical hours allocated for contact work of students with the teacher (types of classes) and independent work of students;
5. The content of the discipline, structured by topics (sections) with indication allocated to them the number of academic or astronomical hours and types of training sessions;
6. The list of training and methodological support for independent work of students on discipline;
7. Assessment tools for intermediate evaluation of students in the discipline;
8. The list of basic and additional educational literature required for the development of the discipline;
9. List of resources information and telecommunications network "Internet" (further - a network "the Internet") necessary for the development of the discipline;
10. Methodical instructions for students for the development of the discipline;
11. The range of information technologies used in the implementation of the educational process in the discipline, including a list of software and information reference systems (if necessary);
12. Description of material-technical base necessary for realization of the educational process in the discipline.
13. Conducting educational activities using e-learning and distance learning technologies.

1. Name of discipline - **ANATOMY**

2. A list of intended learning outcomes for the discipline and the learning outcomes of the educational program

№ №	Competency number / index	Content of competence	Topic of the lesson (section)	Competence achievement indicators	The learning outcomes		
					to know	to be able to	to master
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomical terminology. Axes and planes. Bones of the trunk. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Basic terms used in anatomy to indicate the position of individual points and lines in Russian and Latin transcriptions. 2. The name in Russian and Latin transcription and the mutual position of axes and planes used in anatomy. 3. Which parts are isolated in the spinal column and how many vertebrae form them. 4. Structure and distinctive features of cervical, thoracic, lumbar vertebrae. 5. Features of the structure of the I and II cervical vertebrae. 6. Distinctive features of the I-st, X-th and XI-XII thoracic vertebrae. 7. Parts and details of the structure of the sacrum and coccyx. 8. Classification and structure of ribs. 9. Distinctive features of the I-st, X-th, XI-th and XII-th ribs. 10. Structure of the sternum: arm, body, xiphoid process. 11. X-ray anatomy of the bones of the trunk. 12. Age features of the bones of the trunk.	1. To name and show the direction and mutual position of the axes and planes of the human body. 2. To name and show parts of the skeleton, parts of the spinal column; 3. Distinguish between different types of vertebrae; 4. Correctly to name and show on preparations, details of a structure of vertebrae of various parts of a vertebral column; 5. Correctly connect vertebrae together; 6. To name and show the bends of the spinal column; 7. Determine the parts of the spinal column, individual vertebrae and their parts on radiographs. 8. To find in the set of ribs their individual species, to determine the parts and belonging to the right or left half of the thorax; 9. Correctly orient the sternum, show and name its parts; 10. Correctly determine the shape of the chest;	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	The skeleton of the upper limb. The bones of the girdle of the upper limb. The bones of the free upper limb. Age peculiarities. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The structure and topography of the clavicle. 2. The structure and topography of the scapula. 3. Structure and topography of bones of the free upper limb. • Structure and topography of the humerus, • Structure and topography of the bones of the forearm (radial and ulna bones) • The structure and topography of the bones of the hand (wrist bones, pasterns, phalanges of fingers). 4. X-ray anatomy of the bones of the upper extremities belt and bones of the free upper limb. 5. Age features of the bones of the upper extremity belt and the bones of the free upper limb	1. To name and show individual bones of the shoulder girdle, 2. Correctly orient individual bones of the shoulder girdle in space; 3. Show details of the structure of the bones of the shoulder girdle; 4. Put the humerus in the correct anatomical position, show its parts and details of the structure. 5. Put the radial bone in the correct anatomical position. 6. Put the elbow in the right anatomical position. 7. Put a brush in the correct anatomical position, 8. Determine the bones of the right and left limbs; 9. Show details of the structure of the bones of the forearm and hand; 10. Possess a medical-anatomical conceptual apparatus; 11. Possess the simplest medical instruments - a scalpel and tweezers.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	The skeleton of the lower limb. The bones of the girdle of the lower limb. The bones of the free lower limb. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Sources and course of development, the most common anomalies of bone development, 2. Anatomical structure of the bones of the lower limbs in interrelation with the function; 3. Parts of the skeleton of the lower limb; 4. Structure of the pelvic bone (iliac, ischial, pubic bone); 5. Parts of the skeleton of the free lower limb; 6. The structure of the femur. 7. Structure of the tibia; 8. The structure of the fibula; 9. Departments of the foot, the structure of the individual bones of the foot; 10. The name of the anatomical formations of the bones of the lower extremities in Russian and Latin; 11. X-ray anatomy of the bones of the lower extremity belt and bones of the free lower limb. 12. Age features of the bones of the lower extremity belt and the bones of the free lower limb.	1. Find and show on the anatomical preparations of the bones of the lower limb parts, details of the structure, correctly call them in Russian and Latin; 2. To put pelvic and femur in the correct anatomical position, 3. Determine the bones of the right and left limbs; 4. To show the main details of the structure of the pelvic and femur; 5. Determine the position of the bones of the lower leg and the foot in the skeleton; 6. Correctly show the anatomical formations of the bones of the shin and foot; 7. On the anatomical preparations (isolated bones) and radiographs of the bones of the lower extremities, to identify and describe their anatomical structures; 8. To palpate on the person the basic bone reference points of the studied bones. 9. Possess a medical-anatomical conceptual apparatus; 10. Own the simplest medical instruments - a scalpel and tweezers.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Skeleton of head. Parts of the skeleton of the head. Bones of the cerebral skull. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Anatomical structure of the bones of the facial skull in correlation with the function; 2. Anatomical structure of the bones of the cerebral cranium in relation to function; 3. The name of the anatomical formations of the bones of the cerebral and facial skull in Russian and in Latin; 4. Sources and course of development, the most common anomalies of bone development, 5. Age features of the bones of the cerebral skull and facial bones; 6. Topographic-anatomical relationships between the bones of the brain and facial sections of the skull. 7. X-ray anatomy of the parietal, occipital, frontal, wedge-shaped, latticed bones. 8. Age features of the bones of the cerebral cranium.	1. To find and show on the anatomical preparations of the bones of the brain and facial skull their parts, the details of the structure, correctly call them in Russian and Latin; 2. On the skull determine the position of the bones of the brain skull and facial bones, be able to determine their topographic relationships; 3. To identify and describe their anatomical structures on anatomical preparations (isolated bones) and radiographs of the bones of the cerebral and facial skull; 4. To palpate on the person the basic bone reference points of the studied bones.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	The temporal bone, its departments, canals. Bones of the facial skull, hyoid bone. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The structure and topography of the bones forming the facial region of the skull. 2. The structure and topography of the temporal bone; 3. The channels of the temporal bone, walls, message, value. 4. The structure of the upper jaw. 5. The structure of the lower jaw. 6. The structure of the hyoid bone 7. Topographic-anatomic relationships of bones of the facial Department of the skull. 8. X-ray anatomy of the temporal bone and facial bones of the skull.	1. Find and show on preparations anatomic bone of the facial skull, their parts, structure, name them correctly in Russian and Latin languages; 2. On the skull to determine the position of the facial bones of the skull, to be able to determine their topographic relationship; 3. Show on separate preparations, the details of the structure of the temporal bone. 4. To show on specific drugs, the course of the channels of the temporal bone. 5. On anatomical preparations (isolated bones) and radiographs of the skull's bones to identify and	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					9. The sources and course of development, the most common abnormalities of the bones 10. Age features of the bones of the face; 11. The name of the anatomical structures of the skull's bones in Russian and Latin	describe their anatomical construction; 6. Palpate on a human main bony landmarks of the studied bones.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Development of the skull. The skull as a whole, the roof of skull. The external and internal bases of the skull. The topographical formation of the skull – the channels, fossae. The connection of the skull bones. Temporo-mandibular joint. Age, sexual and individual features of the skull. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Development of the skull (phylogeny and ontogeny). 2. Features of the structure of individual bones of the cerebral and facial skull in connection with their development and functions. 3. Topography of the skull: the cranial vault, the outer and inner bases of the skull. 4. Anterior, middle and posterior cranial fossa, orbit, nasal cavity; Bone base of oral denseness; Temporal, transverse and pterygo-palatine fossae. Their walls, messages, meaning. 5. Paranasal sinuses, structure, topography, significance. 6. Age features of the skull: the skull of the newborn (fontanel and other signs), the relationship in the development of the cerebral and facial skull; Periods of intensive growth after the birth. 7. Old changes in the skull bones. 8. Sexual and typical features of the structure of the skull, developmental anomalies. 9. X-ray of the skull. Criticism of racist theories in the doctrine of the skull. 10. The structure of the temporomandibular joint, its biomechanics.	1. To name and show on preparations and visual aids the following anatomical formations: 1) the boundary between the cerebral and facial skull; 2) seams: coronary, sagittal, lambdoid, scaly; 3) wedge-occipital synchondrosis; 4) the eye socket; 5) lower orbital fissure; 6) upper orbital crack; 7) the visual canal; 8) front and rear latticed holes; 9) nasolacrimal canal; 10) temporal and transverse fossa; 11) pterygo-palatine fossa; 12) wedge-palatal opening; 13) round hole; 9) pterygoid canal; 10) large palatal canal; 11) the external base of the skull; 12) bone skies; 13) hoan; 14) Bone septum of nose; 15) jugular opening; 16) torn opening; 17) musculo-tubular canal; 18) external carotid opening; 19) chiloid-mastoid aperture 20) large occipital foramen; 22) canal of the hyoid nerve; 23) condyle canal or fossa; 24) internal surface of the base of the skull; 25) anterior, middle and posterior cranial fossae; 26) cock's comb; 27) a perforated lamina of the latticed bone; 28) internal auditory opening; 29) internal auditory meatus; 30) furrows of the upper sagittal, transverse, occipital, sigmoid, upper and lower stony sines; 31) the nasal cavity; 32) upper nasal passage; 33) the middle nasal passage; 34) lower nasal passage;	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

						35) frontal, maxillary, sphenoid sinuses; 36) mastoid process; 37) fontanel: anterior, posterior, wedge-shaped, mastoid. 2. Explain the structure, messages and contents of the main topographic structures of the skull, the value of the holes and channels: • eye socket; • lower orbital fissure; • Upper orbital fissure; • visual channel; • Nasolacrimal canal; • temporal and transverse fossa; • pterygo-palatine fossa; • wedge-palatal opening; • Round hole; • pterygoid canal; • large palatal canal; • the external base of the skull; • the jugular aperture; • torn hole; • Musculo-tubular canal; • External carotid opening; • styloid-mastoid aperture • large occipital opening; • the canal of the hyoid nerve; • condyle duct or fossa; • the inner surface of the skull base; • anterior, middle and posterior cranial fossae; • internal auditory opening; • internal auditory meatus; • the nasal cavity; • Upper nasal passage; • middle nasal passage; • Lower nasal passage; • frontal, maxillary, sphenoid sinuses; • mastoid process;	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	THE FINAL LESSON ON THE TOPIC OF "OSTEOLOGY"	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The sources and course of development, the most common abnormalities of the bones, 2. The anatomical structure of bones of trunk, upper and lower limbs, their parts, structure, name them correctly in Russian and Latin languages; 3. Phylogenesis and ontogenesis of the skull. 4. The most common anomalies of development of bones, 5. The anatomical structure of certain bones of the skull, the right to name them in Russian and Latin languages; 6. The topographical formation of the skull, their walls, the content of the message.	1. Show on medicines, plaster casts of anatomical structures of bones of trunk, upper and lower limbs, their parts, structure, name them correctly in Russian and Latin languages; 2. Own medical and anatomical conceptual apparatus; 3. Palpate on a human main bony landmarks of the studied bones of the body. 4. Show on the preparations of the skull, individual skull bones, plaster casts of anatomical structures, their parts, structure, name them correctly in Russian and Latin languages; 5. On radiographs of the skull bones to identify and	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

						describe their anatomic structures and topographic features; 6. Own medical and anatomical conceptual apparatus; 7. Palpate on a human main bony landmarks of the studied bones of the skull.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	General information about the connection of bones. Connection of the bones of the trunk. Joint of the bones of the shoulder girdle. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Types of continuous joints: syndesmosis, synchondroses, synostosis. 2. Discontinuous connections - the joints. 3. Main and auxiliary elements of joints. 4. The major axes of movement. 5. Shape of the articular surfaces. 6. Multiaxial, biaxial and uniaxial joints. 7. Join the vertebrae together with the skull. Ligaments, strengthening them. 8. The intervertebral (facet) joints 9. The connection of the sacrum with the coccyx, 10. The spine as a whole. 11. The types of joints of ribs with sternum and vertebrae. 12. Joints of ribs with sternum and vertebrae. Ligaments, strengthening them. 13. Thorax as a whole. Age peculiarities.	1. To show on the preparations the main axes of movement and the possible volume of movement around them. 2. Describe the forms of articular surfaces. 3. Show on the wet preparation the main and auxiliary elements of the joints. 4. Show the connections of the vertebrae between themselves and with the skull, the sacrum with the coccyx, and the connection of the ribs with the sternum and vertebrae. 5. Explain the mechanism of formation of physiological curves and possible movements in the spinal column. 6. Answer the test questions, 7. Read the radiographs of the joints of the bones of the trunk. 8. Dissect joints (under the supervision of the teacher).	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Connection of bones of the free upper limb. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The structure of the shoulder joint. 2. Characterization of the shoulder joint according to anatomical and biomechanical classifications. 3. Ligament apparatus of the shoulder joint. 4. Biomechanics of the shoulder joint. 5. The structure of the elbow joint. 6. Characteristics of the elbow joint according to anatomical and biomechanical classifications. 7. Ligament joint apparatus of the elbow joint. 8. Biomechanics of the elbow joint. 9. The structure of the proximal and distal radiovolume joints. 10. Characteristics of proximal and distal elbow joints according to anatomical and biomechanical classifications. 11. Ligamentous apparatus of the proximal and distal radiophage joints. 12. Biomechanics of proximal and distal radial-osicular joints. 13. The structure of the wrist joint. 14. Characteristics of wrist joint according to anatomical and biomechanical classifications. 15. Ligamentous apparatus of the wrist joint. 16. Biomechanics of the wrist joint. 17. The structure of the connections of the bones of the hand.	1. Show the structural elements (articular surfaces, ligamentous apparatus) of the shoulder joint on the wet preparation. 2. Describe the forms of articular surfaces of the shoulder joint. 3. Explain the biomechanics of movement in the shoulder joint. 4. Show structural elements (articular surfaces, ligamentous apparatus, auxiliary structures) on the elbow preparation of the elbow joint. 5. Describe the shape of articular surfaces of the elbow joint. 6. Explain the biomechanics of movement in the elbow joint. 7. Show the structural elements (articular surfaces, ligamentous apparatus, auxiliary structures) of the connections of the forearm bones on the wet preparation. 8. Describe the forms of articular surfaces of the joints of the forearm bones. 9. Explain the biomechanics of motion in the joints of the forearm bones. 10. Show structural elements (articular surfaces, ligamentous apparatus, auxiliary structures) of the wrist joint on the wet preparation.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					18. Characteristics of the connections of the bones of the hand according to anatomical and biomechanical classifications. 19. The ligament of connections of the bones of the hand. 20. Biomechanics of joints of the bones of the hand. 21. Age features of the joints of the bones of the upper limb.	11. Describe the forms of the articular surfaces of the wrist joint. 12. Explain the biomechanics of motion in the wrist joint. 13. Show the structural elements (articular surfaces, ligamentous apparatus, auxiliary structures) of the connections of the bones of the hand on the wet preparation. 14. Describe the forms of articular surfaces of the joints of the bones of the hand. 15. Explain the biomechanics of movement in the joints of the bones of the hand. 16. Answer the test questions. 17. Read the radiographs of the joints of the bones of the upper limb. 18. To dissect the joints of the upper limb (under the supervision of the teacher).	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Connection of pelvic bones. Pelvis as a whole. Sex differences. Connection of bones of the free lower limb. Foot as a whole. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The bones of the pelvis. 2. The structure of the sacroiliac joint. 3. The characteristics of the sacroiliac joint according to anatomical and biomechanical classifications. 4. The ligaments of the sacroiliac joint. 5. The structure of the pubic symphysis. 6. The pelvis as a whole. Large and small pelvis. 7. The size of the pelvis. Sex-related differences. 8. Rentgenografija of the pelvis. 9. The structure of the hip joint. 10. Characteristics of the hip according to the anatomical and biomechanical classifications. 11. Ligaments of the hip joint. 12. The biomechanics of the hip joint. 13. Rentgenografija hip joint. 14. The structure of the knee joint. 15. Characteristics of the knee joint according to anatomical and biomechanical classifications. 16. The ligaments of the knee joint. 17. The biomechanics of the knee joint. 18. Rentgenografija the knee joint. 19. Features of the structure proximal and distal joints of the tibia-fibular joints (connections of bones of the Shin). 20. Characteristics of proximal and distal joints of leg bones according to the anatomical and biomechanical classifications. 21. Ligaments proximal and distal joints of leg bones. 22. The biomechanics of the proximal and distal joints of leg bones. 23. The structure of the ankle joint. 24. Characteristics of the ankle according to the	1. Show the structural elements of the connections of the pelvic bones on the wet preparation. 2. Show the structural elements (articular surfaces, ligamentous apparatus) of the hip joint on the wet preparation. 3. Describe the forms of articular surfaces of the hip joint. 4. Explain the biomechanics of movement in the hip joint. 5. Show structural elements (articular surfaces, ligamentous apparatus, auxiliary structures) on the damp preparation of the knee joint. 6. Describe the forms of articular surfaces of the knee joint. 7. Explain the biomechanics of movement in the knee joint. 8. Show the structural elements (articular surfaces, ligamentous apparatus, auxiliary structures) of the joints of the shin bones on the wet preparation. 9. Describe the forms of articular surfaces of the joints of the bones of the shins. 10. Explain the biomechanics of movement in the joints of the lower leg bones. 11. Show structural elements (articular surfaces, ligamentous apparatus, auxiliary structures) on the damp preparation of the ankle joint. 12. Describe the shape of articular surfaces of the ankle joint. 13. Explain the biomechanics of movement in the ankle joint. 14. To show the structural elements (articular surfaces, ligamentous apparatus, auxiliary	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					anatomical and biomechanical classifications. 25. Ligamentous apparatus of the ankle joint. 26. The biomechanics of the ankle joint. 27. Rentgenografija connections of bones of the Shin and ankle. 28. The structure of compounds bones of the foot. 29. Characteristics of the joints of the ankle according to the anatomical and biomechanical classifications. Ligamentous apparatus. 30. Transverse tarsal joint (Saparov joint), brezplacno-pljusnevye joint (joint of Lisfranc) 31. The metatarsophalangeal and interphalangeal joints of the foot 32. The biomechanics of the joints of the foot. 33. Xr-anatomy of the joints of the foot 34. Age features of the joints of the bones of the lower limb.	structures) of the joints of the foot bones on the wet preparation. 15. Describe the forms of articular surfaces of the joints of the foot bones. 16. Explain the biomechanics of motion in the joints of the foot bones. 17. Explain the structure and the value of the transverse joint of the tarsus (Shopar's joint) and the tarsus-metatarsal joint (Lisfrankov's joint). 18. Explain the formation and significance of the arches of the foot. 19. Answer test questions. 20. Read the radiographs of the joints of the bones of the lower limb. 21. Dissect the joints of the lower limb (under the supervision of the teacher)	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	THE FINAL LESSON ON THE TOPIC OF "ARTHROLOGY "	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The axes and planes of the human body. 2. Classification of the connection of bones. 3. Structure, ligaments, biomechanics of movements of the joints of the trunk and extremities. 4. Radiological features of the structure of the connection of the bones of the trunk and extremities. 5. Age features of the joints	1. To show on the preparations the main axes of movement and the possible volume of movement around them. 2. Describe the forms of articular surfaces. 3. Show on the wet preparation the main and auxiliary elements of the joints. 4. Show on the wet preparations the connections of the bones of the trunk and extremities. 5. Explain on the radiographs the structure and age features of the connection of the bones of the trunk and extremities.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	The muscles of the head. Muscles of mastication, facial muscles. Fascias and cellular spaces of the head.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The development of the muscles of the head. 2. The development of the neck muscles. 3. The boundaries and areas of the head. 4. Features of the structure and topography of the masticatory muscles, their function. 5. Features of the structure and topography of facial muscles. Their classification and function. 6. Fasciae of the head. 7. Spaces of the head, their message and value. 8. The name of the anatomical structures of the head muscles in Russian and Latin;	1. Show on the models and on the native preparation chewing muscles of the head and explain their function. 2. Show the mimic muscles of the head on the dummy and on the native preparation and explain their function. 3. List the fascia of the head and their functional significance. 4. Explain the relationship between the interfascial spaces of the head and possible ways of spreading the infection 5. Use anatomical instruments (tweezers, scalpels) 6. Dissect muscles (under the supervision of the teacher).	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological	Muscles and fasciae of the neck. Topography of the neck. Cellular spaces of	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states	1. The development of the neck muscles. 2. The border of the neck. 3. Classification of muscles of the neck. 4. Features of the structure and topography of the neck muscles and their functions.	1. To name and show on the models and on the native preparations the superficial, deep muscles of the neck and explain their function. 2. To show on the model and on the native preparations areas and the triangles of the neck.	- medical and anatomical terminological apparatus; - simple medical

		processes in the human body to solve professional problems	the neck.	and pathological processes of the human body	5. Triangles of the neck. 6. Fascia of the neck. 7. Cellular spaces of the neck, their boundaries and meaning. 8. Interscalenum and antescalenum spaces. 9. Name anatomic formations of the neck muscles in Russian and Latin;	3. To list and explain the functional significance of the fasciae and cellular spaces of the neck. 4. To use anatomical instruments (tweezers, scalpels) 5. To dissect the muscles (under the supervision of the teacher).	tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Diaphragm. The muscles and fasciae of the breast. The muscles and fascia of the back, topographical formations. The muscles and fasciae of the abdomen, topographical formations. The vagina of the rectus abdominis muscle. The white line of the abdomen. The inguinal canal.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The development of the diaphragm. 2. The structure of the diaphragm, its parts, functions. Weak places of the diaphragm. 3. The development of the chest muscles. 4. Classification of muscles in the chest. 5. Muscles acting on the joints of the shoulder girdle, the title, structure, place of the beginning, the place of attachment, function. 6. Own (autochthonous) muscles of the chest, the title, structure, the place of the beginning, the place of attachment, function. 7. Fasciae of the chest. 8. The name of the anatomical structures of the diaphragm, muscles of the chest in Russian and Latin; 9. The development of the abdominal muscles. 10. Border and region of the stomach. 11. Muscles of the lateral abdominal wall, the title, structure, the place of the beginning, the place of attachment, function.. 12. Muscles of the anterior abdominal wall, the title, structure, the place of the beginning, the place of attachment, function.. 13. The muscles of the posterior wall of the abdominal cavity, the title, structure, the place of the beginning, the place of attachment, function. 14. Abdominal fascia. 15. Topographical formations of the anterior abdominal wall - the white line, the vagina of the rectus abdominis muscle, the inguinal canal. 16. The development of the back muscles. 17. Classification of the muscles of the back.. 18. Superficial muscles of the back, the title, structure, the place of the beginning, the place of attachment, function. 19. Deep muscles of the back, the title, structure, function. 20. The fascia of the back. 21. The name of the anatomical structures of the back, abdomen in Russian and Latin;	1. Show the structural elements of the diaphragm on the native preparations, and then explain their function. 2. To name and show the muscles of the chest on the native preparations, the places they start and the points of attachment and explain their function. 3. List fascia of chest and their functional significance. 4. Show on the native preparations the muscles of the back, the place they start and the point of attachment and explain their function. 5. List fascia of the back and their functional significance. 6. To name and show on the native preparations the abdominal muscles, their place of beginning and the point of attachment and explain their function. 7. List the abdominal fascia and their functional significance. 8. To name and show on the native preparations the topographical formation of the abdomen. 9. Explain the differences in the structure of the walls of the vagina of the rectus abdominis muscle above and below the arcuate line. 10. To use anatomical instruments (forceps, scalpel) 11. Dissect the muscles (under the control of the teacher).	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and	The muscles of the upper limb.	Achievement Indicator-3 GPC-5 Determines the morphofunctional,	1. Classification of muscles of the shoulder, forearm and hand. 2. The beginning, the attachment and function of the	1. To name and show muscles of the shoulder girdle on the native preparation, the place of their beginning and the point of attachment and explain	- medical and anatomical terminological

		pathological processes in the human body to solve professional problems		physiological states and pathological processes of the human body	muscles of the shoulder girdle. 3. The beginning, the attachment and function of the shoulder muscles (front and back groups). 4. The beginning, the attachment and function of the forearm muscles (anterior and posterior groups). 5. The beginning, the attachment and function of hand muscles.	their function. 2. To name and show on the native preparation of the muscles of the shoulder, the place of their beginning and the point of attachment and explain their function. 3. To name and show on the native preparation of the muscles of anterior forearm, their place of beginning and the point of attachment and explain their function. 4. To name and show on the native drug back muscle group of the forearm, the place of their beginning and the point of attachment and explain their function. 5. To name and show on the native preparation of the muscles of the hand, the place of their beginning and the point of attachment and explain their function. 6. To use anatomical tools (forceps, scalpel) 7. Dissect the muscles (under the control of the teacher).	apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	The muscles of the lower limbs.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Classification of muscles of the pelvis and hips. 2. Classification of the muscles of the leg and foot. 3. The beginning, the attachment and function of the muscles of the pelvis and hips. 4. The beginning, the attachment and function of the muscles of the shin and foot. 5. The name of the muscles and fascia of the pelvis, hip, shin and foot in Russian and Latin;	1. To name and show on the native preparation a group of external muscles of the pelvis, the place of their beginning and the place of attachment and explain their function. 2. To name and show on the native preparation a group of internal muscles of the pelvis, the place of their origin and the place of attachment and explain their function. 3. Name and show on the native preparation the muscles of the anterior femoral group, the place of their beginning and the place of attachment and explain their function. 4. To name and show on the native preparation the muscles of the medial thigh group, the place of their beginning and the place of attachment and explain their function. 5. To name and show on the native preparation the back muscle group of the thigh, the place of their beginning and the point of attachment and explain their function. 6. Show the wide fascia of the thigh. 7. Show the lateral and medial intermuscular septum of the thigh. 8. To name and show on the native preparation the anterior group of muscles of the thigh, the place of their beginning and the place of attachment, explain their function. 9. To name and show on the native preparation the lateral group of muscles of the thigh, the place of	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

						their beginning and the place of attachment and explain their function. 10. To name and show on the preparation the posterior group of muscles of the thigh, place of their beginning and the point of attachment and explain their function. 11. To name and show the muscles of the plantar surface of the foot. 12. To name and show the muscles of the dorsum of the foot. 13. Show own fascia of the thigh, and its intermuscular septum. 14. Show the retinaculum of the tendons of the thigh muscles and the synovial tendon sheath of the muscles of the foot. 15. To use anatomical tools (forceps, scalpel) 16. Dissect the muscles (under the control of the teacher).	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	The topography of the upper limb. The topography of the lower limb. Fasciae, synovial channels and the vaginae of the upper limb. Fasciae, synovial canals and vaginae of the lower limb.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Fascia of the upper limb (deltoid, supraspinatus, infraspinatus, fascia of the shoulder, forearm and hand). 2. The retinaculums of the flexors and extensors of the upper limb, the wrist canal, and the synovial vagines. 3. Topographic formations of the upper limb (axillary fossa, axillary cavity, radial nerve canal (canalis humeromuscularis), ulnar fossa, forearm furrows). 4. Bone-fibrous channels and synovial vaginas of the hand. The Pirogov space. 5. Fascia of the pelvis and thigh. The functional significance. 6. Fascia of the leg and foot. The functional significance. 7. Topographical formations of the lower limb. 8. Synovial vagina of the tendons of the muscles of the lower limb.	1. Show the topographic formations of the upper limb (axillary fovea, axillary cavity, radial nerve canal (canalis humeromuscularis), ulnar fossa, forearm furrows). To explain their boundaries, communication and clinical significance. 2. To explain the boundaries, topography and clinical significance of the bone-fibrous canals and synovial vagina of the hand. The Pirogov space. 3. Show topographical formations of the thigh, shin and foot (Subpiriforme and infrapiriforme holes, the obturator canal, muscular and vascular lacunae, femoral triangle (Scarp triangle), femoral canal, adductor canal (Gunter's canal), popliteal fossa, canalis cruropopliteus (Gruber`s canal), upper and lower musculo-fibular canals). 4. Use anatomical instruments (tweezers, scalpels) 5. Dissect muscles (under the supervision of the teacher).	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	THE FINAL LESSON ON THE TOPIC "MYOLOGY"	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Classification of neck muscles. 2. Classification of the muscles of the head. 3. Classification of the muscles of the chest 4. Classification of the muscles of the back 5. Classification of abdominal muscles 6. The beginning, attachment, functions of the muscles of the neck. 7. The beginning, attachment, function of the muscles of the head. 8. The beginning, attachment, functions of the muscles of the chest 9. The beginning, attachment, functions of the muscles of	1. Show on the native preparation the beginning, the attachment of the muscles of the head, neck, back, chest, abdomen. 2. To explain the function of the muscles of the head, neck, back, chest, abdomen. 3. To call on the Russian and Latin languages and show on wet preparation of the topographical formation of the head, neck, back, chest, abdomen. 4. To explain the walls, boundaries, communications, topographic formations of the head, neck, back, chest, abdomen 5. To show on the native preparation the beginning,	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					the back 10. The beginning, attachment, function of the abdominal muscles 11. Fascia and interfascial spaces of the head 12. Fascia and interfascial spaces of the neck 13. Fascia and interfascial spaces of the head. 14. Fascia and interfascial spaces of the chest 15. Fasciae and interfascial spaces of the back 16. Fascia and interfascial spaces of the abdomen 17. Topographical formation of the neck. Neck Triangles 18. Topographic formation of the head. 19. Topographic formations of the chest 20. Topographic Back Formations 21. Topographic abdominal formations 22. Classification of the muscles of the upper limb. 23. Classification of the muscles of the lower limb. 24. The beginning, attachment, function of the muscles of the upper limb. 25. The beginning, attachment, functions of the muscles of the lower limb. 26. Fasciae and interfascial spaces of the upper limb 27. Fascia and interfascial spaces of the lower limb. 28. Topographic formations of the upper limb 29. Topographic formations of the lower limb.	the attachment of the muscles of the upper and lower extremities. 6. To explain the function of the muscles of the upper and lower extremities. 7. To call in Russian and Latin languages and to show on the native preparation the topographic formations of the upper and lower limbs. 8. To explain the walls, boundaries, communications, topographic formations of the upper and lower limbs.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the mouth, teeth, tongue and salivary glands, soft palate. Anatomy and topography of the pharynx, esophagus. The course of the food lump (bolus – latin.). Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Functions and principles of the structure of the digestive system. 2. The main stages of development of the digestive system 3. Departments of the digestive tract. 4. The structure of the walls of the oral cavity. 5. Structure and function of the salivary glands. 6. Structure and function of the language. 7. Structure and function of the teeth-jaw apparatus. 8. The types of physiological and pathological bites. 9. Topography of the pharynx, its structure and functions. 10. The component parts of lymphoepithelial ring of Waldeyer-Pirogov. 11. Topography of the esophagus, its structure, function, contraction.	1. Characterize organ according to the following pattern : • Latin (Greek) name; • Development source; • Topography (holo-, skeleto-, syntopy); • External morphological information: shape, configuration, size, density (consistency, weight); • Anatomical structure: part of, sections, sides, surfaces, poles, striations; • Histological structure (structural elements share of 8 , segments, nodules, acinuses etc.); • Function, information of antemortem research methods: radioanatomy, computer-based and magnetic resonance imaging. 2. Name and show walls of oral cavity on sagittal head and sculp cut. 3. Show all structures of oral cavity on sagittal head cut. 4. Find openings of exit ducts og large salivary glands.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

						5. Determine teeth type by characteristic signs and their belonging to right or left alveolar alch. 6. Name and show on wet preparation sections of pharynx, name wall of each section and structural formations on it (tonsils, torus tubarius). 7. Identify and show communication ways between pharynx and other cavities (nose cavity, middle ear cavity, oral cavity, esophagus, larynx) 8. Name layers of larynx walls, explain specificities of mucous membrane of different it segments. 9. Name and show on preparation muscles of larynx. 10. Dissect esophagus and show its constrictions.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the stomach and intestines. Anatomy and topography of the rectum. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Latin terminology of this topic. 2. Topography of the anterior abdominal wall. 3. Topography of the stomach, its structure and functions. 4. Variants of the form and pathology of the stomach, depending on the type of constitution. 5. Golotopia, skeleotopia and sintopy of various parts of the small and large intestine. 6. The departments of the small intestine. 7. Topography, departments and variants of the forms of the duodenum. 8. The structure of the wall of the small intestine. 9. Divisions of the colon, their topography. 10. Anatomic and histological differences of the colon 11. Structure, topography and variants of the position of the appendix. Its functional significance. 12. Departments and topography of the rectum. 13. The relationship of all parts of the intestine with the visceral peritoneum.	1. Characterize organ according to the following pattern : • Latin (Greek) name; • Development source; • Topography (holo-, skeleto-, syntopy); • External morphological information: shape, configuration, size, density (consistency, weight); • Anatomical structure: part of, sections, sides, surfaces, poles, striations; • Histological structure (structural elements share of 8 , segments, nodules, acinuses etc.); • Function, information of antemortem research methods: radioanatomy, computer-based and magnetic resonance imaging. 2. Name and show on wet preparation segments of the stomach, name walls of each segment. 3. By radiography picture identify shape of stomach and explain linkage between stomach's shape and body type. 4. Name layers of stomach's wall. 5. Name and show on corpse (wet preparation) segments of small intestine. 6. Name and show on corpse and by radiography picture segments of duodenum, it linkage with head of pancreas. 7. Find the place of transition of duodenum to small intenstine (duodenumerous bend) . 8. Show on opened preparation longitudinal fold of mucous membrane of duodenum and papilla Vateri. 9. Name and show on the transverse cut the layers of the wall of the small intestine.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

						10. Explain the structure of the mucosa (the presence of villi), based on the functions of the small intestine. 11. Name and show on the corpse, and on the roentgenogram segments of the large intestine and its topography. 12. Name and show on the preparation the external distinctive signs of the large intestine (longitudinal bands, hauters and processes of the serous membrane). 13. Find the vermiform appendage on the preparation, discuss possible variants of its position and the projection of the pain point during inflammation on the abdominal wall. 14. To name and show the final department of the large intestine, to show and explain the importance of anal sinuses (sinuses) on the exposed preparation. 15. Explain the importance of lymphoid tissue (single and group follicles) in the mucosa of the whole gastrointestinal tract. 16. Analyze the features of each of the wall layers along the bowel.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the liver and pancreas. Wonderful network of the liver. Anatomy and topography of the peritoneum. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Topography of the abdominal cavity organs. 2. The structure and development of the peritoneum. 3. The course of the peritoneum. 4. The ratio of organs to the peritoneum. Projection of the abdominal cavity organs. 5. Peritoneal ligaments - liver, stomach, intestines. 6. Channels, fossa of the sinus of the abdominal cavity. 7. Large and small omentum. 8. Gland hole, its boundaries. 9. Deepening of the small pelvis. 10. Topography of the liver, surfaces, lobes, departments and ligaments. Skeletonopia of the liver. 11. Composition of the gate of the liver. 12. Gallbladder, gallbladder, right and left hepatic, vesical and common bile ducts. 13. Features of the structure and blood supply of the liver, a wonderful network of the liver, the internal structure of the liver. 14. Topography of the pancreas, relation to the peritoneum. Function and significance of the pancreas. 15. The islet part of the pancreas. 16. The ratio of the liver to other organs. Depression of the liver. 17. Difference of peritoneal cavity from abdominal cavity.	1. Show on the native preparation and name by Latin the proportion of the liver, its surface. 2. Show and name the gate of the liver in Latin, the contents of the gate of the liver. 3. Show and name the ligament of the liver in Latin. 4. Show and name the large and small oil seals in Latin, explain their formation. 5. Show and name the lower vena cava on the liver and explain its meaning. 6. Show and name the parts of the pancreas in Latin. 7. Show and name by Latin on the lower surface of the liver, gallbladder and ducts. 8. Show and name in Latin on the mucosa of the duodenum of the fetus of the papilla. 9. Show and name the large and small omentum in Latin. 10. Show and name the ligaments of the liver, mesentery of the small and large intestine, deepening and ligaments of the small pelvis, sinuses and channels of the peritoneal cavity, the root of the mesentery of the small intestine, and the folds of the anterior abdominal wall. 11. Show and name the gland hole and its borders in Latin. 12. Show and name in Latin the round ligament of the liver, the lobe of the liver.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					18. Difference between the peritoneal cavity of men and women.	13. Explain the concept of "peritoneal cavity" and "abdominal cavity"; their difference.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the nasal cavity and larynx. Anatomy and topography of the trachea, bronchi and lungs. The course of the air jet. Anatomical and physiological dead spaces. Anatomy and topography of the pleura and mediastinal organs. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1). The structure of the external nose and its cartilage. 2). The structure of the nasal cavity (nasal conchae, nasal passages). 3). Messages of nasal cavity and paranasal shell. 4). The structure of the larynx cavity. 5). Paired and unpaired cartilages of the larynx. 6). Connection of the cartilages of the larynx and ligamentous apparatus. 7). Classification of the larynx muscles. 8). The structure of the trachea and the main bronchi. 9). The structure of the lungs. 10). Structural-functional unit of the lungs (acinus). eleven). The structure of the bronchial and alveolar tree. 12). The structure of pleural sheets. 13). Limits of the lungs and pleura. 14). Departments and organs of the mediastinum. 15) Age features of the respiratory system.	1). Show on the sagittal dissection of the head of the nasal cavity and its formation. 2). Show on the sagittal dissection of the head cavity of the larynx and name its departments. 3). It is right to arrange the cartilage of the larynx relative to each other. 4). Show joints and laryngeal ligaments. 5). Show muscles that expand the vocal cavity. 6). Show muscles that narrow the vocal cavity. 7). Show the muscles that strain the vocal cords. 8). Show the location of the trachea dividing into two main bronchi. 9). Show the root of the lung. 10). Show and name the contents of the gateway of the lung. eleven). Show the surface, lobe and cracks of the right and left lungs. 12). Show parts of the pleura and its dome. 13). Determine the boundaries of the lungs and pleura. 14). Show medication on the preparation and name its parts. 15) On the radiographs of the organs of the respiratory system, identify and describe their anatomical structures;	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	THE FINAL LESSON ON THE PREPARATIONS OF THE ORGANS OF THE DIGESTIVE AND RESPIRATORY SYSTEMS.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Structure and topography of the digestive system. 2. Knowledge of the Latin terminology. 3. Features of the structure of the lobules of the liver 4. Features of the course of the peritoneum. 5. Topography, structure and age features of the respiratory system. X-ray anatomy	1. Characterize organ according to the following pattern : • Latin (Greek) name; • Development source; • Topography (holo-, skeleto-, syntopy); • External morphological information: shape, configuration, size, density (consistency, weight); • Anatomical structure: part of, sections, sides, surfaces, poles, striations; • Histological structure (structural elements share of 8 , segments, nodules, acinuses etc.); • Function, information of antemortem research methods: radioanatomy, computer-based and magnetic resonance imaging. 2. Name and show on the moist preparation the structure of the organs of the digestive system 3. Draw and explain the scheme of the course of the	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

						peritoneum, the structure of the lobule of the liver, the way of excretion of bile. 4. Name in Latin and show on the native preparation both separate organs of the respiratory system and their structural elements	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the kidneys, ureters, bladder and urethra. The course of urine. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Skeleotopia and sintopy of the organs of the urinary system (kidneys, ureters, bladder) in women and men. 2. The internal and fixing apparatus of the kidneys. 3. The structure of the nephron and the peculiarities of the blood supply to the kidneys. 4. Structure of the ureters, departments, narrowing and relation to the peritoneum. 5. Differences in the course of the ureter in the female and male pelvis. 6. Topography of pelvic organs in men and women. 7. Departments and structure of the walls of the bladder, attitude to the peritoneum, peculiarities of the pancreatic triangle. 8. The structure and topography of the male and female urethra and their differences. 9. Function of the male urethra. 10. Age features and X-ray anatomy of the kidneys. 11. Methods of examination of the organs of the urinary system	1. Show the organs of the urinary system on the corpse with the abdominal open. 2. Explain the skeletal to the kidneys. 3. Name and show on the sagittal dissection of the male pelvis the bladder and urethra, and its departments. 4. Name and show the cystic triangle, the internal opening of the urethra, its parts. 5. Name and show in the prostatic part of the canal a seed tubercle. 6. Name and show the location of the narrowing of the ureters, the ureter's sections and the area of the pelvis transition into the ureter, the places where the ureters enter the bladder. 7. Show the position and the course of the urethra on the preparation of the female pelvis.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of male genital organs. Shells of the testicle and scrotum. The course of the semen. The male crotch. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Classification of male genital organs, both internal and external. 2. Structure and function of the prostate, and the urethra. 3. Structure and topography of seminal vesicles. 4. Shells of the testicle and scrotum. 5. The internal structure of the testicle is the seed-forming and semiconductive regions. 6. Departments and structure of epididymis. 7. Formation and topography of the spermatic cord. 8. Ways of deducing the seed. 9. Muscles and fascia of male perineum. 10. The structure of the external genitalia in men. 11. The course of the peritoneum in the small pelvis. Attitude of the peritoneum to the organs.	1. On the whole corpse, organocomplexes and sagittal incisions of the pelvis show and name the external and internal male genital organs. 2. Name and show on the native preparations the muscles of the perineum. 3. Explain the differences between male and female perineum.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of female genital organs. Female crotch. Age features. X-ray anatomy	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Classification of female genital organs, both internal and external. 2. Structure and topography of the uterus. 3. Structure and topography of the ovary. 4. Structure and topography of fallopian tubes. 5. The course of the peritoneum in the small pelvis. Attitude of the peritoneum to the organs. 6. Peritoneal ligament of the uterus and ovary. 7. External female genital organs.	1. On the whole corpse, organocomplexes and sagittal incisions of the pelvis show and name the external and internal female genital organs. 3. Name and show on the native preparations the muscles of the perineum. 4. Explain the differences between male and female perineum.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					8. The structure of the female perineum.		
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	THE FINAL LESSON ON THE PREPARATIONS OF ORGANS OF THE URINARY AND REPRODUCTIV E SYSTEMS.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Topography, structure and age features of the urinary system. X-ray anatomy 2. Topography, structure and age features of the organs of the male reproductive system X-ray anatomy 3. Topography, structure and age features of the organs of the female reproductive system. X-ray anatomy	1. Name in Latin and show on the native preparation both separate organs of the urinary system, and their structural elements 2. Name in Latin and show on the native preparation both separate organs of the male sexual system, and their structural elements 3. Name in Latin and show on the native preparation both separate organs of the female reproductive system, and their structural elements	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the heart. Chambers of the heart, the structure of the wall of the heart. Circles of blood circulation.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The structure of the cardiovascular system and the circulatory system. 2. Structure and topography of the heart. 3. Boundaries of the heart and skeleotopia of its departments and valves. 4. The structure of connective tissue skeleton and individual layers of the heart wall. 5. Features of the structure of the myocardium of the ventricles and atria. Their difference. 6. Circles of blood circulation: small pulmonary and large arterial	1. Name and show on the corpse boundaries of the heart. 2. Name and show the departments, surfaces and grooves of the heart. 3. Name and show the chambers of the heart, the septum, the holes and the valve apparatus. 4. Name and show the oval fossa, ears, comb and papillary muscles and vessels of the base of the heart. 5. Name and show on the native preparation layers of the heart (endocardium, myocardium, epicardium).	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	The blood supply of the heart: arteries and veins of the heart. Conducting system of the heart. Pericardium. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The structure of the conduction system of the heart and the localization of its structures 2. Blood supply to the heart wall, the way outflow of venous blood and topographic relationships of the arteries and veins of the heart. 3. The structure of the pericardium. Fibrous pericardium and serous pericardium, their visceral and parietal plates. 4. Borders, cavity and sinuses of the pericardium. 5. Sedation and its departments.	1. Name in Latin and show on the preparation of the coronary arteries. 2. Name in Latin and show on the vein of the heart. 3. Find and show the sections and cavities of the pericardium, as well as its sinuses (transverse and oblique). 4. Draw and explain the pattern of the conduction system of the heart.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the aorta and its parts. Branches of the aortic arch. The common carotid artery. Anatomy and topography of the external carotid artery and its branches. Anatomy and topography of the	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1). The structure and topography of the aorta, and its departments. 2). The branches of the arch of the aorta. 3). Topography of the common carotid artery and the location of its division into the external and internal carotid arteries. 4). Topography, stroke and branches of the external carotid artery. 5). The terminal branches of the external carotid artery. 6). Topography and the course of the internal carotid artery. 7). Classification of the branches of the internal carotid artery (eye artery and brain arteries). 8). Blood supply to the brain and formation of a large	1). Find and show on the prepared corpse and native preparation the departments of the aorta and its branches. 2. Name and show branches of the arch of the aorta: brachiocephalic trunk, left common carotid and subclavian arteries. 3). Name and show the branches of the brachiocephalic trunk: the right common carotid and subclavian arteries. 4). Show the place of division of the common carotid artery into the external and internal. 5). Find and show on the damp preparation the outer carotid artery and its branches. 6). Determine and show on the wet preparation the	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

			internal carotid artery and its branches. Anatomy and topography of the subclavian artery and its branches. The blood supply of the brain. Age features. X-ray anatomy.		arterial circle (Willis circle). 9). Topography of the course and branch of the subclavian artery before entering into the interstitial space, in the very interval and on the way out of it)	internal carotid artery and its branches. 7). Show the boundaries of the subclavian artery. 8). Name and show the branches of the subclavian artery before entering the interstitial space (vertebral artery, internal thoracic artery and shitosheyny trunk). 8). Name and show the branches of the subclavian artery in the interstitial space (costal-cervical trunk). 9). Name and show the branches of the subclavian artery at the exit from the interstitial space (transverse artery of the neck). 10). Show on the basis of the brain arteries involved in the formation of the arterial circle of the large brain (Willis circle)	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the thoracic and abdominal parts of the aorta and their branches. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The departments of the aorta. 2. Skeleotopia of the thoracic part of the aorta. 3. Topography of the parietal branches of the thoracic part of the aorta, their area of blood supply. 4. Topography of the visceral branches of the thoracic part of the aorta, their area of blood supply. 5. Skeleotopia of the abdominal part of the aorta. 6. Topography of parietal branches of the abdominal part of the aorta. 7. Topography, stroke and area of blood supply of paired visceral branches of the abdominal part of the aorta. 8. Topography, stroke and area of blood supply of unpaired visceral branches of the abdominal part of the aorta.	1. Find and show on the corpse and native preparations the departments of the aorta. 2. Find and show the place of transition of the thoracic part of the aorta into the abdominal. 3. Determine the sources of blood supply to the organs and walls of the thoracic and abdominal cavities. 4. Find and show on the preparation the place of retreat of the common iliac artery from the aorta (aortic bifurcation).	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the common, external and internal iliac arteries and their branches. Age features. X-ray anatomy	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Skeleotopia of the common iliac artery and its branches. 2. Topography and branches of the external iliac artery. 3. Topography of the internal iliac artery, its departments and branches.	1. Find and show on the drug the site of the common iliac artery from the aorta (aortic bifurcation). 2. Show the place of division of the common iliac artery into the internal and external. 3. Show the branches of the external and internal iliac arteries. 4. Determine the sources of blood supply to the walls and organs of the small pelvis.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the arteries of the free upper limb (axillary, brachial arteries, arteries of the forearm and hand). Age features. X-ray	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Topography of the axillary artery in the vascular-neural bundle. 2. Branch of the axillary artery in accordance with the three departments. 3. Anastomoses with branches of the subclavian artery. 4. Topography of the brachial artery in the structure of the neurovascular bundle. 5. Topography and course of lateral branches of the brachial artery.	1. Show on the wet preparation the axillary artery and its branches 2. Name and show on the preparation the brachial artery and its branches. 3. Name and show the final branches of the brachial artery (elbow and ray) on the preparation. 4. Show the topography of the radial artery in the lower third of the forearm. 5. Show the topography of the ulnar artery in the	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

			anatomy.		6. The final branches of the brachial artery (Their topography, course and branches). 7. Branches of the radial artery in the region of the hand. 8. Branches of the ulnar artery in the area of the hand. 9. Formation of the superficial palmar arc and its branches. 10. The formation of a deep palmar arc and its branches.	lower third of the forearm. 6. Show the superficial arterial arch and its branches. 7. Show the deep arterial arch and its branches. 8. Explain the blood supply of the shoulder, elbow and wrist joints.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	The arteries of the free lower limb (thigh, shin and foot). Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Topography of the femoral artery in the vascular-neural bundle. 2.Topography and the course of the proximal branches of the femoral artery. 3. A deep artery of the thigh and its branches. 4.Topography, stroke and branches of the popliteal artery. 5.Topography, stroke and branches of the anterior tibial artery. 6.Topography, stroke and branches of the posterior tibial artery. 7. Dentate and dorsal arteries of the foot with the formation of a dorsal arterial arch. 8. End branches of the posterior tibial artery with the formation of plantar arterial arch. 9. Branches of the back and plantar arterial arches	1. Name and show on the preparation the femoral artery and its branches. 2. Name and show on the preparation popliteal artery and its branches. 3. Name and show on the preparation an anterior tibial artery and its branches. 4. Name and show on the preparation of the posterior tibial artery and its branches. 5. Show the surface and plantar arterial arches on the preparation. Explain their education. 6.Explain the blood supply to the hip, knee and ankle joints	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	The veins of the neck and head. Upper hollow vein. The veins of the thoracic, abdominal cavities and pelvis (unpaired, semi-unpaired, inferior hollow, portal veins). Anatomy and topography of cava-caval and porto-caval anastomoses. Fetal blood circulation. Anatomy of the veins of the upper and lower extremities. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1.Corny of the superior vena cava. 2.Polecheloglovnye vein and its tributaries. 3. Education, topography and course of the internal jugular vein. 4. Intracranial and extracranial inflows of the internal jugular vein. 5. Flow of venous blood from the cranial cavity. 6.Topography of the external jugular vein. 7.Popography of the anterior jugular vein. 8. Education of the jugular venous arch. 9. Education, topography and the course of unpaired and semi-unpaired veins. Their tributaries. 10.Topgraniyu and the course of the inferior vena cava. 11. Peripherals of the inferior vena cava (paired and parietal and visceral) 12. Cores, stroke and topography of the portal vein. 13. Peritoneal portal veins.	1. Name and show on the moist preparation the upper vena cava and its roots (brachiocephalic and subclavian veins). 2. Find and show on the native preparation an internal jugular vein. 3. Find and show the unpaired vein to the right of the spinal column. Its inflows and the place of confluence in the upper vena cava 4. Find and show to the left of the vertebral column a semi-unpaired vein, its tributaries and the place of its entry into the unpaired vein. 5. Find and show on the preparation an additional semi-unpaired vein and the place of its confluence into the semi-unpaired vein. 6. Name and show on the moist preparation the lower vena cava and its roots (iliac veins). 7. Find and show on the corpse pairs of parietal inflows of the inferior vena cava. 8. Name and show on the corpus a pair of visceral tributaries of the inferior vena cava. 9. Find the portal vein and its tributaries (splenic, upper and lower mesenteric veins) on the corpse.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5	Able to assess	**THE FINAL**	Achievement			

	(General professional competences)	morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	**LESSON ON THE PREPARATIONS OF HEART, ARTERIES AND VIENES .**	Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Topography, structure, blood supply to the heart. 2. Topography, the structure of the aorta and its branches. 3. Topography, structure of the upper and lower hollow veins and their tributaries. 4. Topography, the structure of the portal vein and its tributaries. 5. Topography, structure of the arteries and veins of the head and neck. 6. Topography, structure of the arteries and veins of the upper and lower limbs. 7. Blood supply to the organs of the head, neck, thoracic and abdominal cavities. 8. Features of the blood supply of the liver and kidneys - be able to draw schemes. 9. Arterial and venous anastomoses. 10. Features of the fetal circulation.	1. Name in Latin and show on the wet preparation the elements: 2. Topography, structure, blood supply of the heart. 3. Topography, the structure of the aorta and its branches. 4. Topography, structure of the upper and lower hollow veins and their tributaries. 5. Topography, the structure of the portal vein and its tributaries. 6. Topography, structure of the arteries and veins of the head and neck. 7. Topography, structure of arteries and veins of the upper and lower extremities.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the organs of the lymphatic system. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Circles of blood circulation, microcirculatory bed; 2. Scheme of the structure of the lymphatic channel; 3. Know the structure and functions of the structural elements of the lymphatic system; 4. Know the ways of lymph drainage from individual organs and systems; 5. To know large collector lymphatic trunks (intestinal, lumbar, jugular) and ducts (right lymphatic and thoracic); 6. The formation of the jugular angle, the root of the upper genital vein; 7. Composition of lymph.	1. Name, find and show on the preparations the pathways of lymph flow; 2. Name, find and show on the preparations the most important groups of regional lymph nodes; 3. Name ways of outflow of lymph regional lymph nodes from some organs: • from the mammary gland to the axillary, perigendric, mediastinal lymph nodes; • from the lungs to bronchopulmonary, tracheobronchial, mediastinal nodes; • from the esophagus - into the deep cervical, brachiobronchial, posterior mediastinal nodes; • From the small curvature of the stomach and the cardiac part - to the nodes of the small omentum and the gates of the liver; • from the large curvature to the gastro-glandular nodes.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the immune system. Anatomy and topography of organs of the endocrine system. Age features.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Classification of the immune system. 2. Regularities of the bookmark and topography of the organs of the immune system during ontogeny. 3. Topography and departments of the immune system. 4. 4. The external and internal structure of the central and peripheral organs of the immune system. 5. "T" and "B" lymphocytes, their formation, difference and circulation functions. Humoral and cellular immunity. 6. Age features of the immune system. 7. Population of "T" -limfotsitov: "T" -ciller, "T" -pressors, "T" -Amplicators, "T" -helpers, "T" -effectors. 8. Blood supply and innervation of the immune system. 9. The presence in the peripheral organs of the immune	1. Name in Latin and show on the native preparations the central and peripheral organs of the immune system. Thymus, spleen, tonsils, appendix, peyer's plaques, single lymphoid nodules of the mucous membranes of internal organs. 2. Explain the functions of the immune system. 3. On the mucous membrane of the ileum to identify and show the group lymphatic follicles - Peyer's plaques. 4. On histocells determine the embryonic centers of lymphatic follicles - centers of reproduction, light receptors. 5. Find the vermicular appendix on the native preparations of the abdominal cavity organs, determine its position and mesentery.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					system of lymphoid nodules located at different stages of development with germinal light and germinative centers and without them. 10. General characteristics of endocrine glands and their differences from exocrine glands. 11. Development of endocrine glands. Classification of the endocrine glands according to the features of development (ectodermal, mesodermal, ectodermal) 12. Features of the blood supply of endocrine glands 13. Functions of hormones and their differences from other biological active substances. 14. Classification of the endocrine glands in relation to the anterior lobe of the pituitary gland dependent (thyroid gland, cortical adrenal gland, sexual glands) and independent (parathyroid, epiphysis of adrenal medulla, pancreatic islets, paraganglia) 15. The center of regulation of endocrine glands functions is the hypothalamus. 16. The structure of the hypotolamo-pituitary system-hypothalamus-neurohypophysis and hypothalamus-adenohypophysis. 17. General characteristics, topography, external structure and functions of endocrine organs. 18. Know the structure of the sex glands 19. Age features of the endocrine glands	6. Name and show on the native preparations the location of the endocrine glands: 1) the pituitary gland 2) Pineal gland 3) the thyroid gland 4) the adrenal gland 5) the parathyroid gland 7. Explain the functions and features of the blood supply to the anterior and posterior lobes of the pituitary - the primary and secondary capillary networks. 8. Explain the features of the pineal, thyroid, parathyroid, adrenal, pancreas, gonadal glands.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	**FINAL LESSON ON PREPARATIONS OF ORGANS OF LYMPHATIC, ENDOCRINE AND IMMUNE SYSTEMS ".**	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	LYMPHATIC SYSTEM. 1. Features of the structure and topography of lymphatic capillaries. Differences from lymphatic vessels. 2. Features of the structure and topography of lymphatic vessels. Differences from lymphatic capillaries. 3. Features of the structure and topography of lymph nodes. 4. Features of the structure and topography of the thoracic lymphatic duct. 5. Features of the structure and topography of the right lymphatic duct. 6. Features of the structure and topography of the jugular and subclavian trunks. 7. Lymphatic vessels and nodes of the lower limb. 8. Lymphatic vessels and visceral nodes of the pelvis. 9. Lymphatic vessels and parietal nodes of the pelvis. 10. Lymphatic vessels and visceral nodes of the abdominal cavity. 11. Lymphatic vessels and parietal nodes of the abdominal cavity. 12. Lymphatic vessels and visceral nodes of the thoracic cavity. 13. Lymphatic vessels and parietal nodes of the thoracic cavity.	Name in Latin and show the native anatomical preparations of the studied systems: LYMPHATIC SYSTEM. 1. Lymphatic capillaries and lymphatic vessels. 2. Lymph nodes. 4. Thoracic and right lymphatic ducts. 5. Jugular and subclavian trunks. 7. Lymphatic vessels and nodes of the lower limb. 8. Lymphatic vessels, parietal and visceral nodes of the pelvis. 9. Lymphatic vessels, parietal and visceral nodes of the abdominal cavity. 11. Lymphatic vessels, parietal and visceral nodes of the thoracic cavity. 13. Lymphatic vessels and nodes of the head. 15. Lymphatic vessels and nodes of the neck. 16. Lymphatic vessels and nodes of the upper and lower limbs. THE IMMUNE SYSTEM. 1. Bone marrow and thymus, their constituents. 5. Structures of the lymphoepithelial ring of Pirogov-Valdeier. 6. Group lymphoid nodules of the appendix.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					14. Lymphatic vessels and nodes of the head. 15. Lymphatic vessels and nodes of the neck. 16. Lymphatic vessels and nodes of the upper limb. THE IMMUNE SYSTEM. 1. General characteristics of the immune system. 2. Features of the topography and structure of the bone marrow. 3. Features of topography and structure of the thymus gland. 4. Age features of the thymus gland. 5. Features of topography and structure of lingual and palatine tonsils of the lymphoepithelial ring of Pirogov-Valdeier. 6. Features of topography and structure of the pharyngeal and tubal tonsils of the lymphoepithelial ring of Pirogov-Valdeier. 7. Group lymphoid nodules of the appendix. 8. Group lymphoid nodules of the ileum. 9. Single lymphoid nodules. 10. Topography of the spleen. 11. External structure of the spleen. 12. Internal structure of the spleen. ENDOCRINE SYSTEM. 1. General characteristics of endocrine glands, differences from exocrine glands. 2. General characteristics, topography and external structure of the thyroid gland. Blood supply 3. General characteristics, topography and internal structure of the thyroid gland. Blood supply. 4. General characteristics, topography and structure of parathyroid glands. Blood supply. 5. General characteristics, topography of the pancreas. Features of the structure of the endocrine part of the pancreas. 6. General characteristics, topography of the testicle. Features of the structure of the endocrine part of the testicle. 7. General characteristics, topography of the ovary. Features of the structure of the endocrine part of the ovary. 8. General characteristics, topography and structure of the adrenal gland. 9. General characteristics, topography and structure of the pineal gland. 10. General characteristics, topography and structure of the anterior lobe of the pituitary gland. Features of the pituitary blood supply. 11. General characteristics, topography and structure of	8. Group lymphoid nodules of the ileum. 9. Single lymphoid nodules. 10. Structures of the spleen. ENDOCRINE SYSTEM. 1. The structure of the thyroid gland. Blood supply 3. Structure of parathyroid glands. Blood supply. 5. The structure of the endocrine part of the pancreas. Blood supply. 6. The structure of the endocrine part of the testicle. Features of blood supply 7. Features of the structure of the endocrine part of the ovary. Blood supply 8. The structure of the adrenal gland. Features of blood supply 9. The structure of the pineal gland. Features of blood supply 10. Structure of the anterior lobe of the pituitary gland. Features of the pituitary blood supply. 11. Structure of the posterior lobe of the pituitary gland. Features of the pituitary blood supply.	

					the posterior lobe of the pituitary gland. Features of the pituitary blood supply.		
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the spinal cord and its membranes. Formation of spinal nerves. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Development of the spinal cord. 2. Topography of the spinal cord, borders. 3. External structure of the spinal cord. 4. Fixing apparatus of the spinal cord. 5. Formation of the spinal nerve. 6. Formation of the horse tail. 7. Structure of spinal segments. 8. Segmental and supra-segmental apparatus of the spinal cord. 9. Brain cone and end thread. 10. White matter of the spinal cord. 11. Gray matter of the spinal cord. 12. The nuclei of the posterior, anterior and lateral horns of the spinal cord. 13. Shells of the spinal cord 14. Inter-spheroidal space of the spinal cord 15. Differences in the membranes of the spinal cord and brain. 16. Blood supply to the spinal cord. 17. Age changes in the spinal cord. 18. The principle of the formation of afferent pathways: the conscious ways of proprioceptive, extra-receptive sensitivity, unconscious ways of proprioceptivity, their topography; 19. Topography of descending tracts in the cords of the spinal cord;	1. Correctly name and show the white and gray matter of the spinal cord, the base of the core of the gray matter, the structure of the white matter of the spinal cord, the main conductive pathways of the posterior, lateral and middle canals of the spinal cord. 2. Explain the process of formation of the "ponytail". 3. Correctly to name and show details of external structure of a spinal cord and its fixing device. 4. Correctly to name and show the membranes and interobsal spaces of the spinal cord. 5. Explain the formation of arterial and venous anastomoses of the spinal cord, their significance.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	A general overview of the brain and its segments. Topography of the roots of the cranial nerves on the basis of the brain. Membranes of the brain. Anatomy and topography of the hemispheres of the telencephalon. Lobes, furrows (fissures) and	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Divisions of the brain; their topography in the skull. 2. Topography of the brain regions on the basis of the brain on the sagittal and horizontal slices. 3. Places of exit from the brain 12 pairs of cranial nerves. 4. Topography, functional significance, boundaries and external structure of the cerebral hemispheres. 5. Frontal, parietal, occipital, temporal, islet and limbic lobes, their relief (furrows and convolutions) and functional significance; terminal plate and transparent septum. 6. Structure of the cerebral cortex. 7. Localization in the cerebral cortex centers of	1. Find and show the cerebral hemispheres, their anatomical structure, surfaces, 2. Name the parts of the brain, furrows and gyruses, to show their location; find 3. Find and show on the anatomical preparations of the brain the right and left hemispheres, their surfaces, correctly call them in Russian and Latin; 4. Find and show on the anatomical preparations of the brain a cloak or mantle, an olfactory brain, a white substance of the hemispheres; 5. On the brain preparations show the location of the lobes of the brain; 6. On the anatomical preparations (brain)	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

			convolutions. The structure of the cerebral cortex. Localization of functions. The rhinencephalon. Limbic system. Age features. X-ray anatomy.		general sensitivity, vision, hearing and smell. 8. Formation of cortical-spinal and cortical-nuclear (pyramidal) pathways in the cerebral cortex and their functional significance. 9. Localization in the cerebral cortex of the centers of perception and motor centers of speech and writing. 10. Development, topography, structure of the olfactory brain. Limbic system.	identify and show furrows and gyruses, corpus callosum, the membranes of the brain. 7. Anatomical structure of the brain in correlation with function; 8. The name of the shares, furrows, and brains of the cerebral hemispheres in Russian and Latin; 9. localization of functions in the cerebral cortex; 10.membranes of the brain and spinal cord, the way of outflow of cerebrospinal fluid; 11.Age features of the brain; 12. X-ray image of the cerebral hemispheres 13. to find and display on the anatomical preparations of the brain the structure of the olfactory brain.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of basal nuclei. The inner capsule. Anatomy and topography of the corpus callosum. The vault. Lateral ventricles. Anatomy and topography of the diencephalon. III ventricle. Anatomy and topography of the midbrain. The brain drain. Age features. X-ray anatomy.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Development, topography, structure of the olfactory brain. Limbic system. 2. Anatomy and topography of basal nuclei: - Striped body (caudate nucleus, lenticular nucleus), - a fence, - amygdala 3. Anatomy and topography of the inner capsule. Anatomy and topography of the corpus callosum. 5. Anatomy and topography of the arch. 6. Anatomy and topography of the lateral ventricles. Their messages. 7. Age features of basal cores and inner capsule, arch, corpus callosum. 8. Embryonic development of the intermediate and middle brain. 9. Anatomy and topography diencephalon (thalamus region (thalamus, metathalamus, epithalamus) and hypothalamus). 10. Anatomy and topography of the third ventricle (walls, messages). 11. Anatomy and topography of the midbrain. 12. The core of the midbrain. 13. Anatomy and topography of the aqueduct of the brain. 14. Age features of the intermediate and midbrain	1. Find on the preparation and name in Latin the structure of the basal nuclei: • - Striped body (caudate nucleus, lenticular nucleus), • - a fence, • - amygdala 2. Find on the preparation and name the structure of the inner capsule in Latin. 3. Find on the preparation and name the structure of the corpus callosum in Latin. 4. Find on the preparation and name the structure of the vault in Latin. 5. Find on the preparation and name the structure of the lateral ventricles in Latin. Their messages. 6. Find on the preparation and name in Latin the structures of the intermediate brain (thalamic region (thalamus, metatagamus, epithalamus) and hypothalamus). 7. Find the preparation and name the structure of the third ventricle in Latin (walls, posts). 8. Find on the drug and name the structure of the midbrain in Latin. 9. Find on the drug and call in Latin the structure of the midbrain, their nucleus. 10. Find on the preparation and name in Latin the structure of the aqueduct of the brain.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5	Able to assess	Anatomy and	Achievement	1. Embryonic development of the hindbrain.		

	(General professional competences)	morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	topography of the isthmus of the rhombencephalon. Anatomy and topography of the hindbrain. Bridge. Cerebellum. Anatomy and topography of the medulla oblongata. IV ventricle. Anatomy and topography of the rhomboid fossa. Projection of cranial nerve nuclei. Age features. X-ray anatomy.	Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	2. Topography, structure and value of the isthmus of the rhomboid brain. 3. Topography of the bridge. 4. External structure of the bridge. 5. The internal structure of the bridge. 6. Gray substance of the bridge (core). 7. Topography of the cerebellum. 8. External structure of the cerebellum. 9. White matter of the cerebellum. 10. The gray matter of the cerebellum (nucleus) 11. The legs of the cerebellum, their composition. 12. Embryonic development of the medulla oblongata. 13. Topography of the medulla oblongata. 14. External structure of the medulla oblongata (ventral surface of the medulla oblongata: furrows, pyramids, olives, dorsal surface: thin and wedge-like cords and tubercles, furrows, lateral cords). 15. Internal structure of the medulla oblongata (olive nuclei, thin and wedge-shaped nuclei, nucleus of cranial nerves (IX-XII pairs), internal and external arc-shaped fibers, crosshairs, crosshairs of pyramids, white matter). 16. Topography of the IV ventricle. 17. Walls and messages of the IV ventricle 18. Vascular base of the fourth ventricle. 19. Topography of the rhomboid fossa. 20. Projection of cranial nerve nuclei to the rhomboid fossa (sensory, motor, vegetative). 21. Age features; 22. X-ray anatomy.	1. Find on the drug and name in Latin the structure of the hindbrain. 2. Find on the preparation and name the elements of the dorsal and ventral surfaces of the bridge in Latin. 3. Find on the preparation and name the structure of the cerebellum in Latin. 4. Demonstrate the topography of the core of the bridge. 5. Demonstrate the topography of the cores of the cerebellum. 6. Find on the preparation and name in Latin the structure of the medulla oblongata on the ventral surface. 7. Find on the preparation and name in Latin the structure of the medulla oblongata on the dorsal surface. 8. Find on the preparation and name in Latin the walls of the IV ventricle. 9. Find on the preparation and name in Latin the messages of the IV ventricle. 10. Find on the preparation and name in Latin a rhomboid fossa. 11. Find on the preparation and name in Latin the elements of the diamond-shaped fossa. 12. Show the preparation and name the localization of the nuclei of the rhomboid fossa in Latin.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Conductive pathways of the brain and spinal cord. Classification of conducting paths. Ascending conductive pathways of the brain and spinal cord.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. - classification of conductive paths: a) associative paths; b) the commissural ways; c) projection paths; 2. The scheme of functioning of the projection conductive paths of the ascending direction (extra-tractive and proprioceptive); 3. The path of pain and temperature sensitivity 4. The Way of Touch and Pressure 5. The visual path 6. auditory path 7. proprioceptive path of cortical direction	1. - draw and explain the scheme of a simple somatic reflex arc, designate its links; 2.-to name, draw and explain the studied pathways; 3. - show on the diagram the main components of the ways: a) ways of pain and temperature sensitivity; b) the path of touch and pressure; c) the proprioceptive path of the cortical direction; d) proprioceptive path of the cerebellar direction;	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					8. proprioceptive path of the cerebellar direction: a) anterior spinal-cerebellar path (Govers way) b) posterior spinal-cerebellar path (Flexig path)	e) posterior spinal cord - the straight, non-crossed path of Fleksig; f) anterior spinal cord path (Goversov path); g) the visual pathway.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Conductive pathways of the brain and spinal cord. Descending pathways of the brain and spinal cord.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. - classification of conductive paths: • a) associative paths; • b) commissural ways; C) Projection paths; 2. - scheme of the functioning of the projection conductive paths of the descending direction (pyramidal and extrapyramidal). • Pyramid paths: a) the path of conscious movements b) the cortical-nuclear pathway • extrapyramidal pathways: a) red-nuclear-spinal cord path (Monacov path) b) Spinal cord pathway c) tr. nigrospinalis d) mesh-spinal path e) the olivospinal route • descending cerebral movements	1. - draw and explain the scheme of a simple somatic reflex arc, designate its links; 2.-to name, draw and explain the studied pathways; 3. - show on the diagram the main components of the ways: • Pyramid paths: a) the path of conscious movements b) the cortical-nuclear pathway • extrapyramidal pathways: a) red-nuclear-spinal cord path (Monacov path) b) Spinal cord pathway c) tr. nigrospinalis d) mesh-spinal path e) the olivospinal route • descending cerebral movements	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	**FINAL LESSON ON PREPARATIONS OF THE HEAD AND SPINAL BRAIN.**	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Embryonic development of the brain. 2. Topography of the brain regions on the basis of the brain on the sagittal and horizontal slices. 3. Places of exit from the brain 12 pairs of cranial nerves. 4. Topography, functional significance, boundaries, external and internal structure of the cerebral hemispheres. 5. Topography, functional significance, boundaries, external and internal structure of the intermediate brain. 6. Topography, functional significance, boundaries, external and internal structure of the midbrain. 7. Topography, functional significance, boundaries, external and internal structure of the hindbrain. 8. Topography, functional significance, boundaries, external and internal structure of the medulla oblongata. 9. Ventricles of the brain. 10. The rhomboid fossa. 11. Blood supply to the brain. 12. Topography, structure, Age features of the	Name in Latin and show on native preparations: 1. The structure of the cerebral hemispheres. 2. Basal nuclei 3. The structure of the vault 4. The structure of the corpus callosum. 5. Furrows and convolutions of the hemispheres. 6. Structures of the diencephalon. 7. The structure of the midbrain. 8. Structures of the hindbrain. 9. The structures of the medulla oblongata. 10. Shells of the brain and inter-enclosure spaces 11. To call in Latin and show the structure of the spinal cord on native preparations. 12. Draw and explain the conductive pathways of the brain and spinal cord.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					spinal cord. 13. Shells of the spinal cord and intercostal spaces. 14. Blood supply to the spinal cord, arterial and venous anastomoses. 15. Conductive routes of the ascending and descending directions		
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of terminal (0), olfactory (I), visual (II), oculomotor (III), block (IV) and abduction (VI) nerves and their branches.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1) Name, characteristics, number and topography of nuclei 0, I-IV, VI pairs of cranial nerves. 2) Places of exit 0, I-IV, VI pairs of cranial nerves on the basis of the brain and on the base of the skull 3) The structure of the organ of vision. Auxiliary apparatus of the eyeball (straight and oblique, a muscle lifting the upper eyelid). 4) Classification of the neck muscles - superficial and deep muscles. 5) General structure of the language, departments and muscles. 6) The beginning, attachment and innervation of the muscles of the eyeball: the block (IV) nerve-the upper oblique muscle; the abducent nerve (VI) - the lateral rectus muscle; the oculomotor nerve (III) - the lower line, the lower oblique, the upper straight, the medial straight line, the muscles of the upper eyelid. 7) Departments of the olfactory brain. The central and peripheral parts of the olfactory analyzer are threads, nerves, bulbs, tracts, triangles, brain, hook. 8) The central and peripheral parts of the visual analyzer are the retina of the eye, the optic nerve, the cross, the visual tract, the subcortical and cortical centers of vision. 9) Topography of nerves in the eye socket.	1) Name and show on the native preparations of the base of the brain the sites of exit 0, I-IV, VI pairs of cranial nerves. 2) Name and show in the cavity of the orbit II, III, IV, VI pairs of cranial nerves. 3) Name and show on the basis of the brain the optic nerve, the cross, the visual tracts. 4) Name and show subcortical and cortical centers of vision - lateral geniculate bodies and upper dysthonia and spur groove of occipital lobe. 5) Name and show in the cavity of the skull and on the base of the brain - olfactory bulbs on the trellised bone, olfactory tracts, olfactory triangles and its bundles, hook, vaulted gyrus. 6) Name and show on the preparations of the brain and sagittal sections of the head the topography of the course 0, I-IV, VI chmn, the localization of nuclei, branches and the innervation region.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the trigeminal (V) nerve. Age features.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1) The name, characteristics, number and topography of nuclei of the V pair of cranial nerves. 2) The location of the exit on the basis of the brain and the topography of the trigeminal nerve. 3) Localization of the trigeminal nerve nuclei. 4) Topography of the course, branches and area of innervation of the first branch of the trigeminal nerve.	1) Name and show on the native preparations of the base of the brain the places of exit of the V pair of cranial nerves. 2) Name and show in the cavity of the orbit the eye nerve V pairs of cranial nerves. 3) Name and show on the preparation of the skull the location of the node of the trigeminal nerve and the exit of the branches of the trigeminal nerve from the cranial	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					5) Topography of the course, branch and area of innervation of the second branch of the trigeminal nerve. 6) Topography of the course, branches and area of innervation of the third branch of the trigeminal nerve. 7) Formation, topography and branches of the winged node. 8) Topography of nerves in the orbit.	cavity. 4) On the scheme of a rhomboid fossa to show the localization of the trigeminal nerve nuclei. 5) Name in Latin and show on the preparation the topography of the course, the branches and the area of innervation of the optic nerve. 6) Name in Latin and show on the preparation the topography of the course, the branches and the area of innervation of the maxillary nerve. 7) Name in Latin and show on the preparation the topography of the course, the branches and the area of innervation of the mandibular nerve. 8) Name in Latin and show the preparation on topography and branches of the winged node.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the facial (VII) nerve and its branches. Anatomy and topography of the vestibulocochlear (VIII) and (glossopharyngeal) (IX) nerves and their branches. Anatomy and topography of the additional (XI) and sublingual (XII) nerves and their branches. Age features.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The exit of the facial (VII) nerve on the base of the brain and from the cavity of the skull. 2. Topography of the nuclei and the course of the facial (VII) nerve. 3. The branches of the facial (VII) nerve and the region of innervation. 4. Topography of the vestibulocochlear (VIII) nerve. Location on the basis of the brain. 5. Parts and nuclei of the vestibulocochlear (VIII) nerve. 6. The exit of the (glossopharyngeal) (IX) nerve on the basis of the brain and from the cavity of the skull. 7. Topography of the nuclei and the course of the (glossopharyngeal) (IX) nerve. 8. The branches of the (glossopharyngeal) (IX) nerve and the region of innervation. 9. Output of an additional (XI) nerve on the basis of the brain and from the cavity of the skull. 10. Topography of the nuclei and the course of the additional (XI) nerve. 11. The branches of the extra (XI) nerve and the area of innervation. 12. The exit of the sublingual (XII) nerve on the basis of the brain and from the cavity of the skull. 13. Topography of the nuclei and the course of the	1. Name in Latin and show on the native preparation the output of the facial, vestibulocochlear, (glossopharyngeal), accessory and sublingual nerves on the basis of the brain and from the cranial cavity. 2. Name in Latin and show on the native preparation the course of the facial nerve, its branches. 3. Name in Latin and show on the native preparation the course of the vestibulocochlear nerve of the nerve, its branches. 4. Name in Latin and show on the native preparation the course of the (glossopharyngeal)nerve, its branches. 5. Name in Latin and show on the native preparation the course of the additional nerve, its branches. 6. Name in Latin and show on the native preparation the course of the sublingual nerve, its branches. 7. Show the location of the nucleus of the cranial nerves (VII, VIII, IX, XI and XII cranial nerves) on the preparation of the brain stem.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					hyoid (XII) nerve. 14. Branches of the hyoid (XII) nerve and the region of innervation.		
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the vagus (X) nerve and its branches. Age features.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Topography of the vagus nerve exit (X pair) on the basis of the brain and from the skull cavity. 2. Topography of the nuclei of the vagus nerve (X pair) in the trunk of the brain. 3. Topography of the head section of the vagus nerve (X pair). 4. The branches of the head of the vagus nerve (X pair) and the region of innervation. 5. Topography of the passage of the cervical vagus nerve (X pair). 6. Branches of the cervical region of the vagus nerve (X pair) and the region of innervation. 7. Topography of the thoracic section of the vagus nerve (X pair). 8. Branches of the thoracic part of the vagus nerve (X pair) and the region of innervation. 9. Topography of the passage of the abdominal part of the vagus nerve (X pair). 10. Branches of the ventral part of the vagus nerve (X pair) and the region of innervation.	1. Show and name in Latin the trunk of the vagus nerve on the base of the brain, its exit from the cavity of the skull. 2. Name in Latin and show the localization of the nuclei of the vagus nerve on the rhomboid fossa. 3. Explain on topical preparation the topography of the vagus nerve in the neck, in the thoracic and abdominal cavity. 4. Name in Latin and show on the native preparation the organs topographically connected both by the innervation and innervation of the main stems of the vagus nerve, and also by the neurovascular complexes that make up the vagus nerve or its branches. 5. Show on the moist preparation and call in Latin the branches of the cephalic, cervical, thoracic and abdominal parts of the vagus nerve (X pair).	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Sense organs. Leather. Organ of taste. Olfactory organ. Anatomy and topography of the organ of vision. Eyeball. Auxiliary apparatus of the eye. Topography of the vessels and nerves in the orbit. Age features.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The structure of the orbit wall, 2. Anatomy and topography of the eyeball. 3. Shells of the eyeball. 4. Structure of the eye auxiliary apparatus. 5. The structure of the skin as a sensory organ. 6. Structure of the organ of taste. 7. Structure of the olfactory organ. 8. The visual path. 9. Sources of blood supply to the organ of vision.	1. Name in Latin and show the preparation on the wall of the orbit and their components. 2. Name in Latin and show the structure of the eyeball on the preparation. 3. Name in Latin and show on the preparation of the shell of the eyeball. 4. Name in Latin and show on the preparation the elements of the auxiliary apparatus of the eye. 5. Draw and explain the course of the visual pathway. 6. Sources of blood supply to the organ of vision. 7. Name in Latin and show on the skin structure structure as a sensory organ. 8. Name in Latin and show the structure of the organ of taste on the preparation. 9. Name in Latin and show on the preparation of the structure the organ of smell.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the vestibulocochlear organ. External and middle ear. Anatomy and topography of the inner ear. Topography of the vessels and nerves in the orbit. Age features.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The structure of the external ear. 2. The structure of the middle ear. 3. The structure of the inner ear. 4. The structure of the Corti's organ. 5. Auditory way. 6. Sources of blood supply to the hearing organ.	1. Name in Latin and show the structure of the external ear on the preparation. 2. Name in Latin and show the structure of the middle ear on the preparation. 3. Name in Latin and show the preparation of the structure of the inner ear. 4. Draw and explain the course of the auditory path. 5. Sources of blood supply to the hearing organ.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	**FINAL LESSON ON THE PREPARATIONS OF CRANIAL NERVES AND ORGANS OF SENSES.**	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Topography of the course, area of innervation of the olfactory nerve 2. Topography of the course, area of innervation of the optic nerve 3. Topography of the course, localization of nuclei, region of innervation of the oculomotor nerve 4. Topography of the course, localization of nuclei, area of innervation of the nerve block 5. Topography of the course, localization of nuclei, area of innervation of the trigeminal nerve 6. Topography of the course, localization of nuclei, area of innervation of the abducent nerve 7. Topography of the course, localization of nuclei, area of innervation of the facial nerve 8. Topography of the course, localization of nuclei, area of innervation of the vestibulocochlear nerve 9. Topography of the course, localization of nuclei, area of innervation of the glossopharyngeal nerve 10. Topography of the course, localization of nuclei, the region of innervation of the vagus nerve 11. Topography of the course, localization of nuclei, area of innervation of the accessory nerve 12. Topography of the course, localization of nuclei, area of innervation of the hyoid nerve. 13. Topography, structure, blood supply, Age features of the organ of vision. 14. Topography, structure, blood supply, Age features of the organ of hearing.	Name in Latin and show on the drug: 1. Olfactory nerve - a place of exit on the basis of the brain, from the cavity of the skull, branches, the region of innervation 2. The optic nerve is the exit site on the basis of the brain, from the cranial cavity, branches, the innervation region 3. Oculomotor nerve - a place of exit on the basis of the brain, from the cavity of the skull, the localization of nuclei in the brainstem, branches, the innervation region 4. Block - the exit site on the basis of the brain, from the cavity of the skull, the localization of nuclei in the brain stem, branches, the innervation region 5. Troynichesky - a place of an exit on the basis of a brain, from a cavity of a skull, localization of kernels in a trunk of a brain, branches, an innervation area 6. Releasing - a place of exit on the basis of the brain, from the cavity of the skull, the localization of nuclei in the brainstem, branches, the innervation region 7. Facial - a place of exit on the basis of the brain, from the cavity of the skull, the localization of nuclei in the brainstem, branches, the innervation region 8. vestibulocochlear - exit site on the basis of the brain, from the cranial cavity, the localization of nuclei in the brainstem, branches, the innervation region 9. glossopharyngeal - a place of exit on the	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

						basis of the brain, from the cavity of the skull, the localization of nuclei in the brainstem, branches, the innervation region 10. Wandering - a place of exit on the basis of the brain, from the cavity of the skull, the localization of nuclei in the brainstem, branches, the innervation region 11. Additional - an exit place on the basis of the brain, from the cranial cavity, the localization of nuclei in the brainstem, branches, the innervation region 12. Sublingual - a place of exit on the basis of the brain, from the cavity of the skull, the localization of nuclei in the brainstem, branches, the innervation region 13. Contents of the eye socket. 14. Body of sight and hearing.	
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	General anatomy and topography of spinal nerves. Anatomy and topography of the cervical plexus. Age features. Topography of vessels and nerves.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Definition of the spinal nerve. 2. Principle of formation of the spinal nerve, its general characteristic. 3. Characterization of the posterior branches of the spinal nerves 4. Characterization of the anterior branches of the spinal nerves. 5. Formation and topography of the cervical plexus. 6. Classification of the branches of the cervical plexus by the nature of innervation. 7. Diaphragmatic nerve, movement topography, branches, area of innervation 8. Topographic-anatomical relationships between the course of blood vessels and branches of the cervical plexus.	1. Name and show on the corpse cutaneous branches of the cervical plexus. 2. Name and show on the corpse the muscular branches of the cervical plexus. 3. Name and show on the corpse a "neck loop". Explain the mechanism of education and the area of innervation. 4. Name and show on the corpse and follow the course of the diaphragmatic nerve. 5. Explain the significance of the gray connecting branches for muscle function.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the brachial plexus (short and long branches). Topography of vessels and nerves.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Formation and topography of the brachial plexus. 2. Short branches of the brachial plexus, the topography of the stroke and the area of innervation. 3. Long branches of the brachial plexus 4. Musculo-cutaneous nerve, the topography of the stroke and the area of innervation. 5. The median nerve, the topography of the course and the area of innervation. 6. Radial nerve, the topography of the course and the area of innervation.	1. Show on the native preparation and name the brachial plexus in Latin. 2. Show on the native preparation and name in Latin short branches of the brachial plexus. 3. Show on the native preparation and name in Latin the long branches of the brachial plexus.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					7. The medial cutaneous nerve of the shoulder and the medial cutaneous nerve of the forearm, the topography of the stroke and the area of innervation. 8. The ulnar nerve, the topography of the course and the area of innervation. 9. Innervation of the skin of the hand.		
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Intercostal nerves. Anatomy and topography of the lumbar plexus. Age features. Topography of vessels and nerves.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. The principle of formation of the intercostal nerve. 2. Topography of the intercostal nerve and the region of innervation. 3. Formation of lumbar plexus. 4. Topography and branches of the lumbar plexus. 5. Topography of the course and area of innervation of the ilio-hypogastric nerve. 6. Topography of the course and area of innervation of the ilio-inguinal nerve. 7. Topography of the stroke and the innervation area of the femoral-genital nerve. 8. Topography of the course and area of innervation of the lateral cutaneous nerve of the thigh. 9. Topography of the course and area of innervation of the occlusal nerve. 10. Topography of the course and area of innervation of the femoral nerve.	1. Explain and show on the preparation the skeleton of segments of the spinal cord involved in the formation of intercostal nerves, lumbar and sacral plexus; 2. To name in Latin and show intercostal nerves on the preparation; 3. To name in Latin and show on the preparation the branches of the lumbar plexus; 4. Explain the formation of the lumbar plexus; 5. Show on the preparation and explain the zones of cutaneous innervation by the branches of the lumbar plexus;	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	Anatomy and topography of the sacral plexus. Anatomy and topography of the genital and coccygeal plexus. Age features. Topography of vessels and nerves.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Formation of the sacral plexus. 2. Topography and branches of the sacral plexus. 3. Topography of the course and area of innervation of short branches of the sacral plexus 4. Topography of the course and area of innervation of the posterior cutaneous nerve of the thigh. 5. The topography of the stroke and the area of the innervation of the sciatic nerve. 6. Topography of the passage, branches and area of innervation of the tibial nerve. 7. Formation, topography, branches of the genital and coccygeal plexus.	1. Explain and show on the preparation the skeleton of segments of the spinal cord involved in the formation of intercostal nerves, lumbar and sacral plexus; 2. Explain the formation of the sacral, genital and coccygeal plexus; 3. Show on the preparation and explain the zones of cutaneous innervation by the branches of the sacral, genital and coccygeal plexuses;	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the	The autonomic nervous system. Vegetative innervation of organs. Age features.	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological	1. General characteristics of the autonomic nervous system and its departments, its differences from the somatic 2. Anatomical structure of the autonomic nervous system.	1. Explain the functions of the autonomic nervous system and its differences from the somatic. 2. Draw a reflex arc of the somatic and autonomic nervous system.	- medical and anatomical terminological apparatus; - simple

		human body to solve professional problems		processes of the human body	3. The structure of the sympathetic department of the autonomic nervous system, the central and peripheral parts: the nucleus of the large horn, the sympathetic trunk, the ganglia of 1 and 2 pairs of plexuses. 4. Structure of the parasympathetic department of the autonomic nervous system, central and peripheral departments 5. Differences sympathetic from the parasympathetic department. 6. Vegetative innervation of the organs of the head, neck, thoracic and abdominal cavity, pelvis.	3. Show on the cadaveric material sympathetic trunk its departments, and call its branches. 4. Name and show on the native preparation the vagus nerve and its departments. 5. Show on the preparation a rhomboid fossa and a projection of parasympathetic nuclei, cranial nerves. 6. Show on the cadaveric material large and small celiac nerves. 7. Show the projection of the additional nucleus on the mid-brain section. 8. On the diagrams and tables show the departments of the autonomic nervous system and explain their functions, features of the structure and location.	medical tools – scalpel and tweezers.
	GPC-5 (General professional competences)	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	**FINAL LESSON ON PREPARATIONS OF NERVES OF THE BODY, HEAD AND EXTREMITIES.**	Achievement Indicator-3 GPC-5 Determines the morphofunctional, physiological states and pathological processes of the human body	1. Short branches of the brachial plexus. 2. Innervation of the skin of the thigh. 3. The median nerve, its topography, branching region. 4. Innervation of the muscles of the anterior surface of the tibia. 5. Muscles of the shoulder, their innervation. 6. Topography of the sciatic nerve. 7. Innervation of the muscles of the hand. 8. The muscles of the back of the hip group, their innervation. 9. Muscles of the anterior surface of the forearm, their innervation. 10. Innervation of the anterior group of calf muscles. 11. Long branches of the brachial plexus. 12. Short branches of the sacral plexus, branching area. 13. Muscles of the posterior arm group, their innervation. 14. Innervation of the skin of the thigh. 15. Ophthalmic nerve, zones of innervation. 16. The sympathetic nervous system. 17. Cervical plexus, motor branches. 18. Innervation of the muscles of the anterior abdominal wall. 19. Muscles of the anterior surface of the thigh, their innervation. 20. Muscles of the anterior group of the shoulder, their innervation.	1. Name in Latin and show the structure of the spinal cord nerves on the preparation. 2. To be able to draw schemes of reflex arcs - somatic and vegetative.	- medical and anatomical terminological apparatus; - simple medical tools – scalpel and tweezers.

					21. Obstruction nerve, its topography, zones of innervation. 22. Radial nerve, branching area. 23. The cerebrospinal nerve, its structure, branches, formation of plexuses. 24. Innervation of the diaphragm. 25. Border sympathetic trunk, structure and branches. 26. The ulnar nerve, the branching region. 27. Parasympathetic Department of the Autonomic Nervous System. 28. Innervation of the skin of the forearm. 29. Features of the structure of the vegetative and somatic nervous system. 30. Innervation of the muscles of the foot. 31. Cutaneous branches of the cervical plexus. 32. Short branches of the sacral plexus. 33. Muscles of the posterior group of the shoulder, their innervation. 34. Short branches of the sacral plexus, branching region. 35. Long branches of the brachial plexus. 36. Innervation of the skin of the thigh.		

3. The place of discipline in the structure of the educational program

The discipline **«Anatomy»** belongs to the compulsory part of Block 1 of the Federal State Educational Standards of Higher Education in the specialty **31.05.01 GENERAL MEDICINE (**Educational program, partially implemented in English**)**

4. Scope of discipline

№ №	Kind of work		Total credits	Total hours	Semesters		
					№ 1	№2	№ 3
					hours	hours	hours
1	*2*		*3*	*4*	*5*	*6*	*7*
1	**Contact work of students with teacher (total), including:**		-	230	80	80	100
2	Lectures (L)		-	48	10	18	20
3	Practical training (PT)		-	182	40	62	80
4	Seminars (C)		-	-	-	-	-
5	Laboratory work (LR)		-	-	-	-	-
6	Self-study student (IWS)		-	130	58	28	44
7	**Intermediate type certification**	Offset (Z)	-	-	-	-	-
		Exam (E)	1	36	-	-	36
8	**IN TOTAL: General labor intensity**	Hours	-	**396**	108	108	180
		Credit unit	**11**	-	3	3	5

5. The content of the discipline

№№	Semester number	Name of the section of the discipline (module)	Types of educational activities, including independent work of students (in hours)					Forms of monitoring progress
			L	**LR**	**PT**	**IWS**	TOTAL	
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1	1	Introduction	2	-	-	2	4	• Oral questioning on theoretical topics and on native anatomical preparations. • Oral asking for knowledge of anatomical preparations. • Test control. • Checklists. • Situational tasks.
2	1	Locomotor apparatus	8	-	36	60	104	
3	2	Splanchnology	12	-	32	8	52	• Oral questioning on theoretical topics and on native anatomical preparations. • Oral asking for knowledge of anatomical preparations. • Test control. • Checklists. • Situational tasks.
4	2	The organs of the immune system and lymph drainage pathways	2	-	4	2	8	
5		Endocrine glands.	2	-	2	2	6	
6	2	The cardiovascular system	2	-	28	12	42	
7	3	Neurology.	18	-	50	28	96	• Oral questioning on theoretical topics and on native anatomical preparations. • Oral asking for knowledge of anatomical preparations. • Test control. • Checklists. • Situational tasks.
8	3	Esthesiology	2	-	8	8	18	
9	3	Topography of vessels and nerves in different parts of the human body.	-	-	22	8	30	

		IN TOTAL:	**48**	**-**	**182**	**130**	**360**	
		EXAM	-	-	-	-	**36**	
		IN TOTAL:	-	-	-	-	**396**	

6. The list of teaching and methodological support for independent work of students in the discipline

№	Semester number	The name of the educational and methodical recommendations
1.	1	**METHODICAL COLLECTION FOR THE DISCIPLINE "ANATOMY"** for practical exercises and for extracurricular independent work for students of the Faculty of GENERAL MEDICINE **(**Educational program, partially implemented in English**)** in 1 semester: Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
2.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Anatomical terminology. Axes and planes. Bones of the torso. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
3.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "The skeleton of the upper limb. Bones of the girdle of the upper limb: clavicle, scapula. Bones of the free upper limb: the humerus, the bones of the forearm (ulna, radius), bones of the hand (bones of the wrist, metacarpus), phalanges of the fingers. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
4.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "The skeleton of the lower limb. Lower limb belt. Bones of the free lower limb: femur, lower leg bones (tibia, fibula), foot bones. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
5.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Head skeleton, departments. Bones of the cerebral skull: parietal, occipital, frontal, wedge-shaped, ethmoid. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
6.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "The temporal bone, its departments, canals. Bones of the facial skull: upper jaw, palatine bone, lower turbinate, nasal bone, vomer, zygomatic bone, lower jaw. Hyoid bone. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
7.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "The skull as a whole, the roof of the skull. The base of the skull is external and internal. Topographic formations of the skull - canals, pits. The connection of the bones of the skull. Temporomandibular joint. Age, sex and individual characteristics of the skull. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
8.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "General data on the connection of bones. The connection of the bones of the trunk. The connection of the bones of the shoulder girdle is age-related. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
9.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Shoulder joint. Elbow joint. The connection of the bones of the forearm. Wrist joint. Connections of the bones of the hand. X-ray anatomy of the joints of the upper extremities. Age features ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
10.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Joints of the pelvic bones. The pelvis as a whole. Sex differences. The hip joint. Knee-joint. The connection of the bones of the lower leg. Ankle joint. Connections of the bones of the foot. The foot as a whole. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
11.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Muscles of the head. Chewing and facial muscles. Fascia and cellular spaces ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
12.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Muscles and fascia of the neck. Neck topography. Fascia and tissue spaces of the neck. Diaphragm. Muscles and fascia of the chest ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
13.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Muscles and fascia of the back, topographic formations. Muscles and fascia of the abdomen, topographic formations. The rectus sheath. White line of the abdomen. Inguinal canal ". Authors: Head of Department, Associate Professor Totoeva O. N. / Vladikavkaz, 2023
14.	1	Methodical guide for a practical lesson and extracurricular independent work on the topic: "Muscles and fascia of the upper limb. Synovial canals and vaginas. Elements of the topographic anatomy of the upper limb. Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
15.	1	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Muscles and fascia of the lower extremity. Synovial canals and vaginas. Elements of the topographic anatomy of the lower limb. Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
16.	2	**METHODICAL COLLECTION FOR THE DISCIPLINE "ANATOMY"** for practical exercises and for extracurricular independent work for students of the Faculty of GENERAL MEDICINE **(**Educational program, partially implemented in English**)** in the 2nd semester. Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
17.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Anatomy and topography of the oral cavity, teeth, tongue and salivary glands, soft palate. Anatomy and topography of the pharynx, esophagus. The course of the food lump. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
18.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Anatomy and topography of the stomach and intestines. Anatomy and topography of the rectum. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
19.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Anatomy and topography of the liver, pancreas, peritoneum, gallbladder." Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
20.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Anatomy and topography of the nasal cavity and larynx. Anatomy and topography of the trachea, bronchi and lungs. Air jet stroke. Anatomical and physiological

		dead spaces. Anatomy and topography of the pleura and mediastinal organs. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
21.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: “Anatomy and topography of the kidneys, ureters, bladder and urethra. Urine flow. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
22.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: “Anatomy and topography of male genital organs. Value and practical skills. The membranes of the testicle and scrotum. Seed run. Male crotch. Anatomy and topography of the female genital organs. Women's crotch. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
23.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: “Anatomy and topography of the heart. Chambers of the heart, the structure of the wall of the heart. Circles of blood circulation. Blood supply to the heart: arteries and veins of the heart. Conductive system of the heart. Pericardium. Age features of the heart ”. Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
24.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: “Anatomy and topography of the orta and its parts. Branches of the aortic arch. Common carotid artery. Anatomy and topography of the external carotid artery and its branches. Anatomy and topography of the internal carotid artery and its branches. Anatomy and topography of the subclavian artery and its branches. Blood supply to the brain. Age features. X-ray - anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
25.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: “Anatomy and topography of the thoracic and abdominal parts of the aorta and their branches. Anatomy and topography of the common, external and internal iliac arteries and their branches. Value and practical skills. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
26.	2	Methodical guide for a practical lesson and extracurricular independent work on the topic: “Anatomy and topography of the artery of the free upper limb (axillary, brachial arteries, arteries of the forearm and hand). Arteries of the free lower limb (thigh, lower leg and foot). Value and practical skills. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
27.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: “Veins of the head and neck. Superior vena cava. Veins of the chest, abdominal cavities and pelvis (unpaired, semi-unpaired, inferior vena cava, portal vein). Anatomy and topography of cava - caval and porto - caval anastomoses. Fetal circulation. Anatomy of the veins of the upper and lower extremities. Value and practical skills. Age features. X-ray - anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
28.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: “Anatomy and topography of the organs of the lymphatic system. Value and practical skills. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
29.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Anatomy and topography of the immune system." Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
30.	2	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Endocrine glands". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
31.	3	**METHODICAL COLLECTION FOR THE DISCIPLINE "ANATOMY"** for practical exercises and for extracurricular independent work for students of the Faculty of GENERAL MEDICINE **(**Educational program, partially implemented in English**)** in the 3rd semester. Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
32.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: “Anatomy and topography of the spinal cord and its membranes. Spinal nerve formation. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
33.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: “General overview of the brain and its departments. Topography of the cranial nerve roots at the base of the brain. The meninges of the brain. Anatomy and topography of the cerebral hemispheres. Lobes, grooves and convolutions. The structure of the cerebral cortex. Localization of functions. The olfactory brain. Limbic system. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
34.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: “Anatomy and topography of the basal nuclei. Internal capsule. Anatomy and topography of the corpus callosum. Vault. Lateral ventricles. Anatomy and topography of the diencephalon. III ventricle. Anatomy and topography of the midbrain. Brain aqueduct. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
35.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: “Anatomy and topography of the isthmus of the rhomboid brain. Bridge. Cerebellum. Anatomy and topography of the medulla oblongata. IV ventricle. Anatomy and topography of the rhomboid fossa. Cranial nerve nuclei projection. Age features. X-ray anatomy ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
36.	3	Methodological manual for a practical lesson and extracurricular independent work on the topic: "Pathways of the brain and spinal cord." Authors: Head. Dept., Associate Professor Totoeva O.N., Associate Professor, Candidate of Medical Sciences, Tuaeva Z.S. / Vladikavkaz, 2023
37.	3	Methodological guide to a practical lesson and extracurricular independent work on the topic: "Anatomy and topography of the terminal (0), olfactory (I), visual (II), oculomotor (III), block (IV) and abducens (VI) nerves and their branches. Anatomy and topography of the trigeminal (V) nerve. Age features ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023

38.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Anatomy and topography of the facial (VII) nerve and its branches. Anatomy and topography of the vestibular cochlear (VIII) and glossopharyngeal (IX) nerves and their branches. Anatomy and topography of the accessory (XI) and hypoglossal (XII) nerves and their branches. Age features ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
39.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Anatomy and topography of the vagus (X) nerve and its branches. Age features ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
40.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Sense organs. Leather. The organ of taste. Olfactory organ. Anatomy and topography of the organ of vision. Eyeball. Auxiliary apparatus of the eye. Anatomy and topography of the vestibular cochlear organ. Outer and middle ear. Anatomy and topography of the inner ear. Topography of the course of blood vessels and nerves in the orbit. Age features ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
41.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: "General anatomy and topography of the spinal nerves. Anatomy and topography of the cervical plexus. Age features. Topography of the course of blood vessels and nerves. " Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
42.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Anatomy and topography of the brachial plexus (short and long branches). Topography of the course of blood vessels and nerves. " Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
43.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: Intercostal nerves. Anatomy and topography of the lumbar plexus. Anatomy and topography of the sacral plexus. Anatomy and topography of the genital and coccygeal plexuses. Age features. Topography of the course of blood vessels and nerves. " Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023
44.	3	Methodological guide for a practical lesson and extracurricular independent work on the topic: "Autonomic (autonomic) nervous system. Vegetative innervation of organs. Age features ". Authors: Head. Dept., Associate Professor Totoeva O.N. / Vladikavkaz, 2023

7. Assessment tools for the intermediate certification of students in the discipline

№/п	The list of competencies	Semester number	Indicator(s) of assessment	Evaluation Criterion (s)	Grading scale	Name of assessment methods
1	2	3	4	5	6	7
1	GPC-5 (General professional competences)	1, 2, 3	See standard for assessing the quality of education, approved. by order of the Federal State Budgetary Educational Institution Of Higher Education NOSMA of the Ministry of Health of Russia dated July 10, 2018, No. 264 / o	See standard for assessing the quality of education, approved. by order of the Federal State Budgetary Educational Institution Of Higher Education NOSMA of the Ministry of Health of Russia dated July 10, 2018, No. 264 / o	See standard for assessing the quality of education, approved. by order of the Federal State Budgetary Educational Institution Of Higher Education NOSMA of the Ministry of Health of Russia dated July 10, 2018, No. 264 / o	Examination tickets for the exam; Bank of test tasks with the algorithm for the formation of options; Examination tickets for practical skills

8. The list of basic and additional textbooks necessary to study the discipline

Основная учебная литература:

п/№	Наименование	Автор (ы)	Год, место издания	Кол-во экземпляров	
				в библиотеке	на кафедре
1	Textbook of human anatomy : For medical students. In 2 volumes	Sapin M.R., Kolesnikov L.L., Nikitjuk D.B.	M.: New Wave Publishing Aqency, 2015	Vol.1 -35 Vol.2 - 35	-
2	Textbook of human anatomy: For medical students. In 2 volumes-	Sapin M.R., Kolesnikov L.L., Nikitjuk D.B.	M.: New Wave Publishing Agency, 2015	Vol.1-40 Vol.2-40	-
3	Атлас анатомии человека в 4 Т.	Синельников Р.Д. Синельников Я.Р. Синельников А.Я.	М.: Новая волна : Издатель Умеренков. 2007-2017	Т.1 - 25 Т.2 - 19 Т.3 - 17 Т.4 - 15	1

Дополнительная учебная литература:

п/№	Наименование	Автор (ы)	Год, место издания	Кол-во экземпляров	
				в библиотеке	на кафедре
1	Атлас анатомии человека: учеб. пособие	Неттер Ф.	М.: ГЭОТАР-Медиа. 2003, 2007. 2015	22	1
2	Human developmental anatomy	Kurt E. Johnson.	Baltimore: Williams & Wilkins, 1991	1	
3	Clinically oriented anatomy	Moore K.	Baltimore: Williams & Wilkins. 1992	1	

СОГЛАСОВАНО
Зав. библиотекой

9. The list of resources of information and telecommunication network "Internet", necessary for mastering the discipline

Reference materials, electronic libraries and magazines:

- wikipedia.org
- http: // anatomiya-atlas .ru
- http: // www .anatomcom.ru
- ELS "Student Consultant" www.studmedlib.ru
- www.anatomia.ru
- MedExplorer, MedHunt, PubMed.
- http://elibrary.ru

Russian scientific journals on human anatomy:

- **MORPHOLOGY (ARCHIVE OF ANATOMY, HISTOLOGY AND EMBRYOLOGY)**
- **MORPHOLOGICAL STATEMENTS**
- **CLINICAL AND EXPERIMENTAL MORPHOLOGY**
- **JOURNAL OF ANATOMY AND HISTOPATOLOGY**

10. Guidelines for students on the development of discipline

Training consists of contact work of students with teacher (222 hours), including a lecture course and practical classes, and independent work (138 hours). The main study time is allocated for practical work. During practical classes, students study anatomical macropreparations, locate individual organs in the human body and in themselves, master the preparation and prepare anatomical preparations of individual organs and areas of the human body. Dissection implements one of the competencies - the ability and willingness to use anatomical medical tools and teaches future doctors to independent thinking, which is necessary for an individual approach to a sick person in the clinic.

During classes, students acquire the following practical skills: using basic anatomical tools, dissecting joints, muscles, vessels, nerves, establishing skin innervation zones of peripheral nerves, determining basic anthropometric points and lines to determine the constitutional features of the body structure, draw lines on the skin surface to determine contours internal organs. They master the palpation of the main bone formations, superficial arteries, the main groups of lymph nodes.

Methods used in the study of human anatomy: the use of natural embalmed preparations (individual organs and parts of the body) in the educational process; preparation as a classic method of studying anatomy; vascular injections with embalming solutions, colored solidifying masses; work with enlightened and corrosive preparations; study of X-rays of bones, joints and some other organs; the use of macro-microscopic pictures of various organs of the human body, making cuts (according to NI Pirogov) in different planes, macro-microscopy.

During classes, students' knowledge is verified by the method of testing, frontal and individual interviews on native anatomical preparations. Upon completion of the study of each section of the anatomy of the final lesson. The following methods are used on a living person: anthropometry, fluoroscopy and radiography, tomography.

For a successful and fruitful learning and mastering by students of the program on human anatomy, preference is given to individual student work.

Teaching human anatomy involves close integration with other departments throughout the entire period of study: biology and histology, cytology, embryology.

Materials from biology help to understand the biological nature of man in a series of vertebrates, structural, age and sex characteristics of the human body. In agreement with the Department of Biology, the Department of Human Anatomy is a brief comparison of a person in a comparatively anatomical plan with the development of vertebrate animals.

In the process of teaching human anatomy, first of all, a systematic approach is used (students study the human body using systems), topographic-anatomical principles (studying the position and relationship of organs and tissues with each other, with parts of the skeleton and the walls of the cavities). In the course of human anatomy, the data of plastic anatomy (anatomy for artists) are widely used to better understand the proportions and relief of the human body, the comparative anatomy data to study the origin and change of organs at the stages of phylogenesis.

Work with educational literature is considered as a type of educational work on the discipline and is performed within the hours of independent work of students assigned to study it. Various types of educational work, including independent work of a student, contribute to mastering the culture of thinking, the ability to formulate its results logically and correctly in written and oral speech; willingness to form a systematic approach to the analysis of medical information, the perception of innovation; form the ability and willingness to self-improvement, self-realization, personal and objective reflection.

Each student is provided with access to library funds of the North Ossetian State Medical Academy and the Department of Human Anatomy.

For each section of the discipline developed guidelines for students and guidelines for teachers.

The department created the conditions for independent work of students, which is carried out in two forms - classroom and extracurricular.

Self-Work is carried out in several directions. The first direction is to work on complete, prepared cadavers and separate anatomical preparations. Students use compulsory and additional literature. The second direction is the independent production of preparations on the current topic with the active consultations of teachers. Special attention at the department is paid to the organization of independent extracurricular work of students. Every day after 16 hours each student can receive the desired macropreparation for study and, using the methodological instructions, prepare answers to the questions submitted for independent work. In the organization of extracurricular work, methodological developments are actively used for students in each section of anatomy.

Student work in a group creates a sense of collectivism and sociability. It is necessary to educate students, guided by the traditional principles of humanism and mercy, respectful and careful attitude to the object being studied - the organs of the human body, to the corpse; inculcate high moral standards of behavior in the sectional halls of a medical school.
Educational activity of students at the department is assessed in the framework of the implemented point-rating system for assessing their knowledge and skills. It is conducted in accordance with the provision on the point-rating system for evaluating the educational activities of students of the North Ossetian State Medical Academy. The final certification is carried out at the end of the 3 semester of studies and includes three stages: preexamination testing, assessment of practical skills, interview. The exam in human anatomy is conducted in the scope of this program.

11. The list of information technologies used in the implementation of the educational process in the discipline

Microsoft Office
PowerPoint;
Acrobat Reader;
Internet Explorer

12. Description of the material and technical base necessary for the implementation of the educational process in the discipline

The provision of the educational process with specialized equipment (laboratory equipment, phantoms (with names), models (with names), etc.
HUMAN ANATOMY

№	Equipment Identification	Amount	Technical Condition
	Special equipment		
1.	Microscope, pieces	1	Satisfied
2.	Negatoscope, pieces	3	Satisfied
3.	Other equipment (list)	-	-
	Phantoms		
4.	Missing		
	Native anatomical preparations		
5.	Neurovascular corpse	1	Satisfied
6.	Muscular corpse	1	Satisfied
7.	Sagittal head cuts	3	Satisfied
8.	Upper and lower limbs (muscles, nerves, blood vessels)	3	Satisfied
9.	Respiratory System Organs	8	Satisfied
10.	Organs of the digestive system	9	Satisfied
11.	Genitourinary system	15	Satisfied
12.	Brain and spinal cord	14	Satisfied
13.	Bone joints	20	Satisfied
14.	Bones of the body, head, limbs	57	Satisfied
	Dummies		
15.	Head and neck	2	Satisfied
16.	Eyes	3	Satisfied
17.	Fetus	7	Satisfied
18.	Hip joint	1	Satisfied
19.	Hearing aid	1	Satisfied
20.	Liver	1	Satisfied
21.	Tables	600	Satisfied

Security of the educational process by technical means of training, computer equipment
HUMAN ANATOMY

№	Name of equipment	Quantity	Technical content
1	Computer (computer class)	5 (10)	Satisfied
2	Notebook	2	Satisfied

3	Projector	1	Satisfied
4	Scanner, Copier, Printer	2, 2	Satisfied
5	Television	-	-
6	Video camera	-	-
7	Camera	-	-
8	Overhead	1	Satisfied
9	Interactive anatomical table Anatomage	1	Satisfied
10	Other technical training tools (list)	-	-

13. Conducting educational activities using e-learning and distance learning technologies In the context of the introduction of restrictive measures (quarantine) associated with an unfavorable epidemiological situation, the threat of the spread of a new coronavirus infection and other force majeure events that do not allow full-time training, it is possible to study this discipline or part of it using e-learning and distance educational technologies. Teaching the discipline in the above situations will be carried out through the development of an electronic course with access to video lectures and interactive course materials: presentations, articles, additional materials, tests and various tasks. When conducting training sessions, monitoring progress, as well as intermediate certification of students, platforms of the electronic information and educational environment of the academy and / or other e-learning systems recommended for use in the academy, such as Moodle, Zoom, Webinar, etc., can be used. Lectures can be presented in the form of audio, video, "live lectures", etc. Conducting seminars and practical classes is possible on-line both in synchronous and asynchronous modes. Seminars can be held in the form of web conferences