FUND OF ASSESSMENT TOOLS

for the Course "Normal anatomy"

Level of Higher Education:

Specialist Degree Program

Field of Study (Program Code):
560001 – General Medicine (Kyrgyz Republic) (for international students)

Qualification: Medical Doctor (MD)

2026

The Fund of Assessment Tools is intended for monitoring the knowledge of students in the field of study (specialty) "General Medicine" for international students in the discipline (practice) "*Normal Anatomy*" (1st year).

The Fund of Assessment Tools was reviewed and approved at the meeting of the Department of

Anatomy, Histology and Physiology

Protocol No. __1___ dated "__26__" __August__ 2026
Head of the Department of
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1. LIST OF COMPETENCIES WITH INDICATION OF THE STAGES OF THEIR FORMATION IN THE PROCESS OF MASTERING THE DISCIPLINE

Competencies being formed	Planned learning outcomes for the discipline characterizing the stages of competency formation	Types of assessment tools / section code in this document
OPC-5: Capable of assessing morphofunctional, physiological states and pathological processes in the human body for solving professional tasks	**Know:** - basic morphofunctional, physiological states and pathological processes in the human body; - specifics of the main morphofunctional, physiological states, pathological processes of the human body in comparison; - main ways of differentiation and conclusion-making based on the assessment of morphofunctional, physiological processes and pathological conditions of the patient.	**Block A, D** – tasks of reproductive level - test; - questions
	Be able to: - explain the meaning of basic morphofunctional, physiological states and pathological processes in the human body; - conduct comparison of various morphofunctional, physiological states; - note the practical value of specific morphofunctional,	**Block B, D** – tasks of reconstructive level - tests - control work

Competencies being formed	Planned learning outcomes for the discipline characterizing the stages of competency formation	Types of assessment tools / section code in this document
	physiological processes and pathological conditions of the human body.	
	Professional competences: – skills in identifying the main morphofunctional, physiological states and pathological processes in the human body; – techniques for searching and comparing various morphofunctional, physiological states and pathological processes of the human body; – skills in assessing and differentiating the main morphofunctional, physiological and pathological conditions of the human body, as well as providing independent justification.	**Block C, D** – practice-oriented and/or research level tasks

2. COURSE ASSESSMENT AND GRADING MATRIX

"Normal Anatomy"

Year/ Semester: 1 / 1
Credits (ZE): 5
Final Assessment: Pass / Fail

Module / Section according to the WPD	Assessment Type	Assessment Method	Min. Passing Score	Max. Passing score	Schedule (Week)
Module 1					
"Osteosyndesmology and Skull"	Continuous Assessment	Oral questioning, class participation, attendance, homework	3	5	6
	Midterm Assessment	Oral assessment	5	9	
Module 2					
"Myology"	Continuous Assessment	Oral questioning, class participation, attendance, homework	3	5	9
	Midterm Assessment	Oral assessment	5	9	
Module 3					
'Digestive System"	Continuous Assessment	Oral questioning, class participation, attendance, homework	3	5	12
	Midterm Assessment	Oral assessment	5	9	
Module 4					
'Respiratory System"	Continuous Assessment	Oral questioning, class participation, attendance, homework	3	5	15
	Midterm Assessment	Oral assessment	5	9	
Module 5					

'Urogenital System"	Continuous Assessment	Oral questioning, class participation, attendance, homework	3	5	18
	Midterm Assessment	Oral assessment	5	9	
Total for the semester			40	70	
Final Assessment (Pass/Fail)			20	30	
Semester-long course grade			60	100	

Notes:
One (1) point is deducted for each unexcused lecture or practical session that is not made up.
One (1) bonus point is awarded for active class participation.

2. COURSE ASSESSMENT AND GRADING MATRIX

"Normal Anatomy"

Year/ Semester: 1 / 2
Credits (ZE): 5
Final Assessment: Exam

Module / Section according to the WPD	Assessment Type	Assessment Method	Min. Passing Score	Max. Passing score	Schedule (Week)
Module 1					
"CNS"	Continuous Assessment	Oral questioning, class participation, attendance, homework	3	5	5
	Midterm Assessment	Oral assessment	5	9	
Module 2					
"Cranial nerves and sensory organs"	Continuous Assessment	Oral questioning, class participation, attendance, homework	3	5	9
	Midterm Assessment	Oral assessment	5	9	
Module 3					
'Heart, Vessels and nerves of the head and neck"	Continuous Assessment	Oral questioning, class participation, attendance, homework	3	5	12
	Midterm Assessment	Oral assessment	5	9	
Module 4					
'Vessels and Nerves of the cavities"	Continuous Assessment	Oral questioning, class participation, attendance, homework	3	5	15
	Midterm Assessment	Oral assessment	5	9	
Module 5					
'Vessels and Nerves of the limbs"	Continuous Assessment	Oral questioning, class participation, attendance, homework	3	5	18
	Midterm Assessment	Oral assessment	5	9	
Total for the semester			40	70	
Final Assessment (Pass/Fail)			20	30	
Semester-long course grade			60	100	

Notes:
One (1) point is deducted for each unexcused lecture or practical session that is not made up.
One (1) bonus point is awarded for active class participation.

Block A (1st semester)

A 1. Oral questioning

Module: Osteosyndesmology, Skull

1. Which of the following anatomical features is uniquely characteristic of all typical cervical vertebrae (C3–C6)?

A) A long, downward-pointing spinous process
B) A transverse foramen
C) Costal facets on the lateral aspects of the vertebral body
D) A massive, kidney-shaped vertebral body
E) Prominent mammillary and accessory processes

2. Which bony landmark on the proximal humerus serves as the primary attachment site for the supraspinatus, infraspinatus, and teres minor muscles?

A) Lesser tubercle
B) Greater tubercle
C) Surgical neck
D) Anatomical neck
E) Deltoid tuberosity

3. Which of the following structures is located on the posterior surface of the femoral shaft and serves as the major attachment site for the adductor muscles of the thigh?

A) Greater trochanter
B) Linea aspera
C) Intercondylar fossa
D) Patellar surface
E) Lesser trochanter

4. Which bone forms the "keystone" of the cranial floor because it articulates with all other cranial bones?

A) Ethmoid bone
B) Frontal bone
C) Occipital bone
D) Sphenoid bone
E) Temporal bone

5. Which specific part of the temporal bone articulates with the mandibular condyle to form the temporomandibular joint?

A) Mastoid process
B) Styloid process
C) Mandibular fossa (glenoid fossa)
D) Zygomatic process
E) Petrous part

Module: Myology

1. Which muscle of the anterolateral abdominal wall has muscle fibers that run in an inferomedial direction (often described as the direction of "putting your hands in your front pockets")?

A) Transversus abdominis
B) Internal oblique
C) External oblique

D) Rectus abdominis
E) Pyramidalis

2. Which of the following muscles is NOT a component of the rotator cuff of the shoulder?
A) Supraspinatus
B) Infraspinatus
C) Teres minor
D) Subscapularis
E) Teres major

3. Which specific movement is primarily produced by the muscles located in the anterior compartment of the leg?
A) Plantarflexion of the foot
B) Inversion of the foot
C) Dorsiflexion of the foot
D) Eversion of the foot
E) Flexion of the knee

4. Which muscle of the anterior thigh is unique among the quadriceps femoris group because it crosses both the hip and knee joints, allowing it to flex the hip and extend the knee?
A) Vastus lateralis
B) Rectus femoris
C) Sartorius
D) Pectineus
E) Gracilis

5. Which specific muscle is primarily responsible for initiating the abduction of the arm at the glenohumeral joint during the first 0 to 15 degrees of movement?
A) Deltoid
B) Supraspinatus
C) Infraspinatus
D) Teres major
E) Pectoralis major

Module: Digestive system

1. Which specific peritoneal fold connects the greater curvature of the stomach to the transverse colon?
A) Hepatogastric ligament
B) Gastrocolic ligament
C) Gastrosplenic ligament
D) Hepatoduodenal ligament
E) Falciform ligament

2. Which of the following is a macroscopic anatomical feature found exclusively on the large intestine and is completely absent on the small intestine?
A) Plicae circulares (valves of Kerckring)
B) Villi and microvilli
C) Taeniae coli
D) Peyer's patches
E) Brunner's glands

3. Which part of the duodenum is entirely retroperitoneal and crosses the midline horizontally, anterior to the vertebral column at the level of the L3 vertebra?
A) Superior (first) part
B) Descending (second) part
C) Horizontal (third) part
D) Ascending (fourth) part
E) Hepatopancreatic ampulla

4. Which anatomical landmark within the anal canal marks the transition from the columnar epithelium of the hindgut to the stratified squamous epithelium of the proctodeum?
A) Anorectal ring
B) Pectinate (dentate) line
C) White line of Hilton
D) Anal valves
E) Rectal columns (of Morgagni)

5. The esophagus has several normal anatomical constrictions. Which of the following structures causes the most inferior (lowest) normal constriction of the esophagus?
A) The cricopharyngeus muscle (upper esophageal sphincter)
B) The tracheal bifurcation (carina)
C) The left main bronchus
D) The esophageal hiatus of the diaphragm
E) The root of the lung

Module: Respiratory system

1. Into which specific region of the nasal cavity does the nasolacrimal duct primarily drain?
A) Sphenoethmoidal recess
B) Superior nasal meatus
C) Middle nasal meatus
D) Inferior nasal meatus
E) Common nasal meatus

2. Which laryngeal cartilage is the only one that forms a complete, 360-degree ring around the airway and serves as the foundational base for the larynx?
A) Thyroid cartilage
B) Cricoid cartilage
C) Arytenoid cartilage
D) Epiglottic cartilage
E) Corniculate cartilage

3. Which of the following anatomical descriptions accurately distinguishes the right main (primary) bronchus from the left main bronchus?
A) It is longer, narrower, and more horizontal.
B) It is shorter, wider, and more vertical.
C) It bifurcates into only two lobar bronchi.
D) It has a more acute angle of departure from the trachea.
E) It is entirely extrapulmonary and lacks cartilaginous support.

4. Which specific fissure is consistently present in the right lung to separate the superior and middle lobes, but is typically absent in the left lung?
A) Oblique (major) fissure
B) Horizontal (minor) fissure
C) Accessory fissure
D) Mediastinal fissure
E) Basal fissure
5. During quiet respiration, which specific pleural recess represents the most dependent (lowest) part of the pleural cavity, where excess fluid (pleural effusion) is most likely to accumulate?
A) Costomediastinal recess
B) Costodiaphragmatic recess
C) Phrenicomediastinal recess
D) Pulmonary ligament
E) Cervical pleura (cupula)
Module: Urogenital system
1. Which specific fascial layer directly encloses the kidney and its associated perirenal fat, separating them from the surrounding pararenal fat?
A) Transversalis fascia
B) Renal (Gerota's) fascia
C) Parietal peritoneum
D) Dartos fascia
E) Scarpa's fascia
2. Which specific anatomical landmark within the urinary bladder defines the smooth, triangular area bounded by the two ureteric orifices and the internal urethral orifice?
A) Detrusor muscle
B) Uvula vesicae
C) Trigone of the bladder
D) Interureteric crest
E) Apex of the bladder
3. In the normal anatomical position of the female reproductive organs, the uterus is typically described as being both anteflexed and anteverted. What does the term "anteverted" specifically describe?
A) The forward bending of the uterine body relative to the cervix
B) The forward angulation of the entire uterus (cervix and body) relative to the axis of the vagina
C) The posterior tilt of the uterine fundus into the rectouterine pouch
D) The lateral displacement of the uterine fundus toward the pelvic sidewall
E) The superior positioning of the ovaries relative to the uterine tubes
4. Which specific peritoneal recess represents the most dependent (lowest) part of the peritoneal cavity in a standing or semi-upright female, located between the rectum and the posterior wall of the uterus/vagina?
A) Vesicouterine pouch
B) Rectouterine pouch (Pouch of Douglas)
C) Pararectal fossa

D) Hepatorenal recess (Morison's pouch)
E) Omental bursa (Lesser sac)

5. The ureter exhibits three normal anatomical constrictions along its course from the kidney to the bladder. Which of the following represents the most inferior (lowest) of these constrictions?

A) The ureteropelvic junction
B) The point where it crosses the pelvic brim
C) The intramural segment as it pierces the bladder wall
D) The midpoint of its retroperitoneal descent
E) The junction with the minor renal calyces

A 2. Midterm Assessment Questions

Module 1: «OSTEOSYNDESMOLOGY ANB SKULL»

1. Introduction to osteology: Definition, functions of the skeleton, and anatomical terminology (planes, axes, and directional terms).
2. Chemical composition of bone tissue and age-related changes in bone structure.
3. Bone as an organ: Structure of compact and spongy bone, periosteum, endosteum, bone marrow, and blood supply.
4. Classification of bones by shape. Structure of a long (tubular) bone (diaphysis, epiphysis, metaphysis).
5. Bone development (osteogenesis): Intramembranous and endochondral ossification. Centers of ossification and bone growth.
6. Classification of joints: Synarthroses (fibrous and cartilaginous joints) and their types.
7. Diarthroses (synovial joints): Basic elements (articular surfaces, capsule, cavity) and auxiliary structures (ligaments, discs, menisci, bursae).
8. Classification of synovial joints by the shape of articular surfaces and axes of movement (uniaxial, biaxial, multiaxial).
9. Development of joints (arthrogenesis) and common congenital anomalies of the skeletal system.
10. Structure of a typical vertebra. Atypical cervical vertebrae (C1, C2, C7) and their specific features.
11. Atypical thoracic vertebrae (T1, T10, T11, T12) and their specific features.
12. The vertebral column as a whole: Physiological curvatures, biomechanics, and common developmental defects (e.g., spina bifida, scoliosis).
13. Joints of the vertebral column: Intervertebral discs, facet (zygapophyseal) joints, and ligaments of the spine.
14. Atlanto-occipital and atlanto-axial (median and lateral) joints: Structure and movements.
15. The bony thorax: Structure of the sternum and ribs. Sternocostal, costovertebral, and costotransverse joints.

16. Bones of the pectoral girdle: Clavicle and scapula.
17. Sternoclavicular and acromioclavicular joints: Structure, ligaments, and biomechanics.
18. Bones of the free upper limb: Humerus, radius, ulna, and the bones of the hand.
19. Shoulder (glenohumeral) joint: Structure, ligaments, movements, and clinical significance (e.g., dislocations).
20. Elbow joint: Structure (humeroulnar, humeroradial, proximal radioulnar joints), ligaments, and movements.
21. Radioulnar joints (proximal, middle, distal) and the interosseous membrane of the forearm.
22. Joints of the hand: Radiocarpal (wrist) joint, midcarpal joint, carpometacarpal joints (including the 1st CMC joint of the thumb), metacarpophalangeal, and interphalangeal joints.
23. The bony pelvis as a whole: Bones of the pelvis, dimensions, types (male vs. female), and clinical significance.
24. Sacroiliac joint and ligaments of the pelvis (including the pubic symphysis).
25. Bones of the free lower limb: Femur, patella, tibia, fibula, and the bones of the foot.
26. Hip joint: Structure, ligaments (e.g., iliofemoral ligament), movements, and blood supply to the femoral head.
27. Knee joint: Structure, menisci, cruciate and collateral ligaments, bursae, and biomechanics.
28. Syndesmoses of the leg bones: Distal tibiofibular joint and the interosseous membrane.
29. Ankle (talocrural) joint: Structure, ligaments, and movements.
30. Joints of the foot: Subtalar, talocalcaneonavicular, calcaneocuboid, transverse tarsal (Chopart's joint), and tarsometatarsal (Lisfranc's joint) joints. Arches of the foot and their clinical significance (e.g., flatfoot).
31. General principles of human embryogenesis: germinal stages and the formation of the embryonic disc.
32. Pharyngeal (branchial) arches: skeletal derivatives and congenital defects of the 1st pharyngeal arch.
33. Ossification of the skull: development of the neurocranium and viscerocranium.
34. Age-related features of the skull: periods of growth and the role of synchondroses.
35. The skull of the newborn: anatomy of the fontanelles, their closure timelines, and clinical significance.
36. Types, etiology, and clinical implications of craniosynostosis.
37. Classification, anatomy, and clinical relevance of the cranial sutures.
38. Bones of the neurocranium (cranial vault): frontal, parietal, and occipital bones (structure and key landmarks).
39. Bones of the neurocranium: sphenoid and ethmoid bones (structure, pneumatization, and key landmarks).
40. The temporal bone: general structure, parts (squamous, tympanic, petrous, mastoid), and key landmarks.
41. Bones of the viscerocranium (facial skeleton): structure and key landmarks of the maxilla, mandible, zygomatic, nasal, lacrimal, palatine, and hyoid bones.
42. External surface of the cranial base: key foramina and their contents.

43. Internal surface of the cranial base: Anterior cranial fossa (boundaries, foramina, and contents).
44. Internal surface of the cranial base: Middle cranial fossa (boundaries, foramina, and contents).
45. Internal surface of the cranial base: Posterior cranial fossa (boundaries, foramina, and contents).
46. The orbit: walls, foramina, fissures, and communications with other cranial cavities.
47. The nasal cavity: bony walls, formation of the nasal septum, and the conchae.
48. The nasal meatuses (superior, middle, inferior): anatomy and communications with the paranasal sinuses and nasolacrimal duct.
49. Paranasal air sinuses: anatomy, drainage pathways, and clinical significance (e.g., sinusitis).
50. Topographic regions of the skull: Temporal and Infratemporal fossae (boundaries and contents).
51. The pterygopalatine fossa: boundaries and communications (a key "crossroads" of the head).
52. The canals of the petrous part of the temporal bone: detailed anatomy and contents of the carotid canal, facial canal, chorda tympani canaliculus, tympanic canaliculus, musculo-tubarial canal, and mastoid canaliculus.
53. Temporomandibular joint (TMJ): anatomy of articular surfaces, articular disc, ligaments, movements, and clinical relevance (e.g., dislocation).
54. Clinical anatomy of skull fractures: typical locations, mechanisms of injury, and associated neurovascular complications (e.g., Battle's sign, raccoon eyes, CSF rhinorrhea/otorrhea).

Module 2: "MYOLOGY"

1. Muscle Tissue Types: Histological and functional differences between skeletal, cardiac, and smooth muscle tissue.
2. Structure of Skeletal Muscle: Macroscopic organization (epimysium, perimysium, endomysium) and microscopic structure (sarcomere, myofibrils, motor unit, neuromuscular junction).
3. Accessory Structures of Muscles: Fascia, tendons, aponeuroses, synovial sheaths, bursae, and sesamoid bones; their functions and clinical significance.
4. Classification of Muscles: By shape, location, number of joints crossed, and function (agonists, antagonists, synergists, fixators).
5. Embryological Development of Muscles: Origin from somites (myotomes) and pharyngeal arches; general principles of muscle migration and innervation.
6. Development of the Diaphragm & Congenital Defects: Embryological origins of the diaphragm; pathogenesis and clinical presentation of congenital diaphragmatic hernias (e.g., Bochdalek, Morgagni).
7. Development of Head and Neck Muscles: Derivatives of the pharyngeal (branchial) arches; congenital anomalies (e.g., congenital muscular torticollis).
8. Development of the Limbs: Myotome migration into limb buds; common congenital abnormalities of limb musculature.
9. Muscles of Facial Expression: Location, function.
10. Muscles of Mastication: Anatomy and biomechanics of chewing.

11. Temporomandibular Joint (TMJ) Kinematics: Muscles responsible for depression, elevation, protrusion, retrusion, and lateral excursion of the mandible.
12. Muscles of the Neck:
    a. Suprahyoid and infrahyoid muscles.
    b. Anterior, lateral, and posterior cervical muscle groups.
13. Muscles of the Thoracic Wall: Extrinsic and intrinsic muscles (intercostals, transversus thoracis, subcostales); biomechanics of respiration.
14. Anterior Abdominal Wall: Muscles (external/internal oblique, transversus abdominis, rectus abdominis), their aponeuroses, and the formation of the rectus sheath above and below the arcuate line.
15. Midline Structures: Linea alba and umbilicus; anatomical weak points and clinical significance (e.g., epigastric and umbilical hernias).
16. The Inguinal Canal: Boundaries, contents (spermatic cord/round ligament), and the anatomical basis of direct vs. indirect inguinal hernias.
17. The Diaphragm: Structure, major openings (caval, esophageal, aortic), and referred pain patterns.
18. Muscles of the Back:
    c. Superficial (extrinsic) muscles connecting the upper limb to the trunk.
    d. Deep (intrinsic/epaxial) muscles (erector spinae, transversospinalis) and the suboccipital triangle.
19. Muscles Connecting the Upper Limb to the Axial Skeleton: Trapezius, latissimus dorse, pectoralis major/minor, serratus anterior; scapular kinematics and "winged scapula."
20. The Axilla: Boundaries, contents, and the communicating axillary spaces (triangular, quadrangular, triangular interval).
21. Muscles of the Arm: Anterior (flexor) and posterior (extensor) compartments.
22. Muscles of the Forearm: Anterior (flexor-pronator) and posterior (extensor-supinator) compartments; superficial, intermediate, and deep layers.
23. The Carpal Tunnel and Flexor Retinaculum: Boundaries, contents.
24. Muscles of the Hand: Thenar, hypothenar, lumbricals, palmar/dorsal interossei; intrinsic hand biomechanics.
25. Muscles Acting on the Shoulder (Glenohumeral) Joint: The rotator cuff (SITS muscles), deltoid, and their role in joint stability and movement.
26. Muscles Acting on the Elbow Joint: Flexors, extensors, pronators, and supinators; anatomical basis of common epicondylitis (tennis/golfer's elbow).
2. V. Muscles of the Lower Limb
27. Muscles of the Gluteal Region and Pelvic Wall: Gluteus maximus/medius/minimus, piriformis, obturator internus; relationship to the sciatic nerve and safe injection zones.
28. Muscles of the Thigh: Anterior (extensor), medial (adductor), and posterior (hamstring) compartments; the femoral triangle and adductor (Hunter's) canal.
29. The Femoral Canal and Femoral Ring: Boundaries, contents, and the anatomical basis of femoral hernias.
30. Muscles of the Leg: Anterior (dorsiflexors), lateral (evertors), and posterior (plantarflexors) compartments; the popliteal fossa.

31. Muscles of the Foot: Dorsal and plantar compartments (four layers); functional comparison to the hand.
32. Muscles Acting on the Hip Joint: Flexors, extensors, abductors, adductors, and rotators; Trendelenburg sign and gait abnormalities.
33. Muscles Acting on the Knee Joint: Extensor mechanism (quadriceps, patella, patellar ligament) and flexors; biomechanics and common injuries.
34. Arches of the Foot: Medial, lateral, and transverse arches; supporting structures (plantar aponeurosis, ligaments, muscles) and clinical significance (pes planus/flatfoot, pes cavus).

Block B

B.1. Midterm Assessment Questions

Module 3: "Vessels"

1. The development of the heart.
2. The chambers of the heart.
3. The wall of the heart, features.
4. The conducting system of the heart.
5. The blood supply of the heart.
6. The pericardium, features.
7. The development of the arteries.
8. Arch of aorta, branches, topography.
9. Externa carotid artery, branches.
10. Internal carotid artery, branches.
11. Subclavian artery, branches.
12. Superior vena cava, formation, tributares.
13. The venous sinuses of the dura matter, the emissary and diploic veins.
14. Internal jugular vein, tributaries.
15. External jugular vein, tributaries.
16. Anterior jugular vein.
17. Subclavian vein, tributaries.
18. Lymph of head and neck.
19. The various pattens in the branches of the intraorganic arteries.
20. Collateral blood circulation.
21. Development of the veins.
22. Blood supply of the fetus.
23. The systemic circulation.
24. The pulmonary circulation.
25. The thoracic aorta, branches.
26. The superior vena cava: azygos and hemiazygos veins, brachiocephalic veins.
27. The abdominal aorta, branches.
28. The inferior vena cava, tributaries.
29. The portal vein, tributaries.
30. Internal iliac artery, branches.
31. Internal ilia vein, venous plexuses of the pelvic.
32. The immune system features.

33. The lymphatic system features.
34. The structure of the lymph node.
35. The lymph nodes, vessels and ducts of the thoracic cavity.
36. The lymph nodes, vessels and ducts of the abdominal cavity.
37. The lymph nodes, vessels of the pelvic cavity.
38. Cavacaval and portocaval anastomosis.
39. The axillary artery, branches.
40. The axilla, walls and foramens, their contains.
41. The brachial artery, branches.
42. The ulnar artery, branches.
43. The radial artery, branches.
44. The anastomosis of the cubital fossa.
45. The anastomosis of the hand.
46. The anatomical snuffbox, formation, contains.
47. The superficial veins of upper limb.
48. The deep veins of the upper limb.
49. The lymph nodes and vessels of the upper limb.
50. The femoral artery, branches.
51. The adductor canal, walls and contain.
52. The popliteal artery, branches.
53. The anterior tibial artery, branches.
54. The posterior tibial artery, branches.
55. The cruropopliteal canal, walls and contain.
56. Arteries of the foot.
57. The superficial veins of the lower limb.
58. The deep veins of the lower limb.
59. The lymph nodes and vessels of the lower limb.

Block C

C.2. Midterm Assessment Questions

Module 4: "Nerve system"

1. The classification of the nervous system.
2. The neuron, types, " white matter", "gray matter".
3. Development of the spinal cord, neural tube defect.
4. The reflex arch.
5. The external features of the spinal cord.
6. The grey matter of the spinal cord.
7. The white matter of the spinal cord.
8. The meninges of the spinal cord, the spaces.
9. Development of the brain.
10. The features of the medulla oblongata, lesions.
11. The features of the pons, innervations of facial muscles.
12. The features of midbrain, lesions.
13. The fourth ventricle, features.

14. The external features of cerebellum.
15. The internal structure of the cerebellum, nuclei.
16. The cerebellar connections input and output.
17. The cerebellar control of posture, vestibule-ocular reflex.
18. The diencephalon, features, thalamus, lesions.
19. The epithalamus, penial body, features.
20. The hypothalamus, features, nuclei.
21. The hypophysis cerebri features.
22. The third ventricle features.
23. The cerebral hemisphere, features, lesions.
24. The superolateral surface of the cerebral hemisphere.
25. The medial and inferior surface of the cerebral hemisphere.
26. The layers the cerebral cortex, types of cells, neocortex, allocortex.
27. The functional anatomy of the cerebral cortex. Brodmann areas.
28. The basal ganglia, features, lesions.
29. The limbic system, lesions.
30. White matter of the cerebral hemispheres, corpus callosum, fornix.
31. The internal capsule, parts, arrangement of fibers.
32. The classification of the conductive tracts (association, commissural, projection).
33. The spinothalamic tract (anterior and lateral).
34. The anterior and posterior spinocerebellar tract.
35. The dorsal column medial lemniscus tract.
36. The pyramidal tracts: corticonuclear and corticospinal (anterior, lateral).
37. The rubrospinal tract.
38. The lateral ventricle, features.
39. The meninges of the brain. Dura mater: layers, processes, sinuses.
40. The arachnoids mater of the brain, subarachnoid space, cisterns, and circulation of the cerebrospinal fluid.
41. The pie matter of the brain, cerebrospinal fluid, hydrocephalus
42. The spinal nerves, features.
43. The cervical plexus, branches.
44. III, IV, V pairs of the cranial nerves.
45. V cranial nerves, nuclei branches.
46. Vegetative ganglions of the trigeminal nerves.
47. The vagus nerve, parts, branches.
48. The glossopharyngeal nerve, nuclei branches.
49. XI, XII pairs of the cranial nerves.
50. The sympathetic part of the vegetative nerve system.
51. The parasympathetic part of the vegetative nerve system.
52. Sympathetic trunk, parts, branches.
53. Lumbar plexus, formation, branches.
54. Sacral plexus, formation, short branches.
55. Intercostal nerves, branches.
56. The short branches of the brachial plexus.
57. The long branches of the brachial plexus.

58. The long branches of the sacral plexus.
59. The lumbar plexus: femoral and obturator nerves, lateral cutaneous nerve of the thigh.

Block D

List of Questions and Tasks for Final Assessment (Graded Pass)

KNOWLEDGE REQUIREMENTS (What the student must know):

- Anatomical research methods and anatomical terminology.
- Major stages in the development of anatomical science and its significance for medicine and biology.
- Main branches of human anatomy, along with traditional and modern anatomical research methods.
- General patterns of human body structure and the structural-functional relationships of its parts.
- The significance of fundamental anatomical research for both practical and theoretical medicine.
- Anatomical and topographic relationships of organs and body parts in adults, children, and adolescents.
- Key structural and topographic details of organs and organ systems, along with their primary functions across different age periods.
- Possible anatomical variations, major anomalies, and congenital malformations of organs and their systems.
- The applied value of acquired anatomical knowledge (adult, pediatric, and adolescent) for subsequent medical training and future professional practice.

PRACTICAL SKILLS (What the student must be able to do):

- Correctly use anatomical instruments (e.g., forceps, scalpels).
- Identify and point out organs, their parts, and structural details on anatomical (cadaveric) specimens, correctly naming them in Russian and Latin.
- Navigate the topography and structural details of organs on anatomical specimens, correctly identifying and naming them in Russian and Latin.
- Locate and isolate muscles, fascia, major blood vessels, nerves, glandular ducts, and individual organs through dissection.
- Identify and point out organs and their key structural details on X-ray images.
- Locate and palpate major bony and muscular landmarks on a living human body, map the projections of major neurovascular bundles in various body regions, and correctly name and demonstrate joint movements.
- Utilize scientific literature effectively.
- Identify organs, their parts, and structural details on medical imaging modalities (e.g., X-rays, CT scans, and MRI).

PROFESSIONAL COMPETENCIES (What the student must master):

- Basic information processing technologies.
- Independent study skills using printed and digital educational materials, as well as online resources related to human anatomy.
- The medical-anatomical conceptual and terminological framework, as well as basic dissection techniques using standard medical instruments (scalpels and forceps).

4. Midterm Assessment

Continuous Assessment: Mastery of course material during in-class sessions (lectures, practical classes) and completion of mandatory independent study assignments.

Continuous Assessment Grading Scale

1 **semester**

Modules	Practical Classes (hours)	Lectures (hours)	Weight (%)	Score	
				min	max
Module 1 "Osteosyndesmology, Skull"	24	8	30	5	9
Module 2 "Myology"	10	6	13	5	9
Module 3 "Digestive system"	12	8	20	5	9
Module 4 "Respiratory system"	6	2	10	5	9
Module 5 "Urogenital system"	10	8	27	5	9
Total	90	36	100	25	45

No	Assessment Component	Weight (%)	Score	
			min	max
1	Frontal oral questioning	0-60%	15	27
2	Lecture notes	0-10%	3	5
3	Practical class performance	0-30%	8	14
4	Class participation	-	2	2
5	Attendance	-	2	2
6	Midterm assessment	-	10	20
7	Total		40	70

Note: Students are permitted to take the midterm assessment regardless of attendance record and completion of other coursework.

2 **semester**

Modules	Practical Classes (hours)	Lectures (hours)	Weight (%)	Score	
				min	max
Module 6 "Central Nervous System"	18	10	31	8	15
Module 7 "Cranial nerves and Sensory organs"	15	6	20	5	9
Module 8 "Heart. Vessels and Nerves of the head and neck"	9	6	9	3	4
Module 9 "Vessels and Nerves of the cavities"	12	8	20	5	9
Module 10 "Vessels and Nerves of the limbs"	10	2	20	5	9
Итого	64	32	100	26	46

No	Assessment Component	Weight (%)	Score	
			min	max
1	Frontal oral questioning	0-60%	15	27
2	Lecture notes	0-10%	3	5
3	Practical class performance	0-30%	8	14
4	Class participation	-	2	2
5	Attendance	-	2	2
6	Midterm assessment	-	10	20
7	Total		40	70

Note: Students are permitted to take the midterm assessment regardless of attendance record and completion of other coursework.

Assessment Criterion: A total score of 40 to 70 points accumulated during the 1st semester is required to be eligible for the final assessment (Pass/Fail).

Continuous Assessment Tasks (Pass/Fail) -
These tasks consist of questions requiring student responses, divided into two equal components:

- Theoretical Knowledge: Requires a minimum of 50% correct answers.
- Name and Identify (Practical): Requires a minimum of 50% correct responses.

Practical Task: Identify and name 10 specific parts of various organs on anatomical models.
Objective: To assess students' readiness for in-class practical work.

Continuous Assessment Grading Scale
Minimum passing score: 20 points

- 28 – 30 points (90–100%): Excellent
- 24 – 27 points (75–85%): Good
- 20 – 23 points (50–74%): Satisfactory
- Less than 20 points (<50%): Unsatisfactory (Fail)

Passing Criterion: A minimum of 50% correct answers is required to pass the continuous assessment.

MIDTERM ASSESSMENT
Evaluates the completeness of theoretical knowledge and practical skills across the entire module.

Midterm Assessment Grading Scale
Format: Written Test
Maximum Score: 30 points
Test Results Grading:
Refer to the Appendix for the detailed grade calculation methodology.
Passing Criterion: A minimum of 60% correct answers is required to pass the test and become eligible for the final exam.

FINAL COURSE ASSESSMENT (EXAMINATION)
A comprehensive evaluation of the completed course (or the entire discipline).

Final Assessment Grading Scale
Final Assessment Tasks:

- **Theoretical Knowledge:** 50%
- **Name and Identify (Practical):** 50%

Maximum score for the examination component: 30 points.
Examination Grading Scale:

- **28 – 30 points (90–100%):** Excellent
- **24 – 27 points (75–89%):** Good
- **20 – 23 points (60–74%):** Satisfactory
- **Less than 20 points (<60%):** Unsatisfactory (Fail)

Practical Examination Requirements:
For each question, students must identify and name parts of bones and organs. On the

anatomical table (cadaveric specimens), students must correctly identify and name blood vessels and nerves.

Passing Criterion: A minimum of 50% correct answers is required to pass the final examination.

(For a detailed grade calculation methodology, refer to the Appendix).

FINAL COURSE GRADE CALCULATION

The final course grade is calculated based on the student's cumulative performance throughout the academic year, incorporating continuous assessment, midterm assessment, and the final examination (a weighted average is applied).

Maximum Score Breakdown by Assessment Type:

- Continuous Assessment (pass/fail): max 30 points (30%)
- Midterm Assessment (Test): max 40 points (40%)
- Final Assessment (Examination): max 30 points (30%)

Final Transcript Grading Scale:

The final course grade, reflecting performance over the entire study period, is recorded in the official academic transcript according to the following scale:

- 85 – 100 points: Excellent
- 70 – 84 points: Good
- 60 – 69 points: Satisfactory
- Less than 60 points: Unsatisfactory (Fail)

CONTINUOUS ASSESSMENT GRADING SCALE

Frontal Oral Questioning

No	Assessment Criterion	Score (%)
1	Class participation	0 - 10
2	Interpretation of human body structure in relation to its functional capabilities	0 - 35
3	Understanding of organ structure and function, adequacy of interpretation	0 - 10
4	Justified use of quantitative data (relevance and reliability of information)	0 - 20
5	Key terms (their importance for organ interpretation, correct usage, quantity)	0 - 5
6	Logical coherence and sequence of oral presentation	0 - 20
Participation Score (Continuous Assessment)		**Total Score**

Lectures Notes Assessment

No	Assessment Criterion	Score (%)
1	Lecture notes content must correspond to the specified sections	0 - 30

2	Completeness and quality of topic coverage according to the specified sections	30 - 50
3	Independent work completion, use of recommended and reference literature	0 - 20
Lecture Notes Score (Continuous Assessment)		**Сумма баллов**

Practical Assignment

No	Assessment Criterion	Score (%)
1	Practical skills using demonstration materials	0-30
2	Reproductive activity (review of previously learned material): a) Recognition of material with external prompts; b) Independent recall of learned information	0-25
3	Preparation of anatomical specimens	0-15
4	Preparation of visual teaching aids	0-30
Practical Assignment Score (Continuous Assessment)		**Total Score**
Overall Continuous Assessment Score		**Average**

Continuous Assessment Tasks (Pass/Fail)

These tasks consist of questions requiring student responses on the following topics:

1. Osteosyndesmology *(know)*
2. Myology *(know)*
3. Splanchnology *(know)*
4. Name and Identify on cadaveric specimens and anatomical models *(Skills and Competencies)*

No	Assessment Criterion	Score (%)
1	Question 1	0 – 20
2	Question 2	0 – 20
3	Question 3	0 – 20
4	Question 4	0 – 40
Performance Score (Pass/Fail)		**Total Score**

COURSE ASSESSMENT AND GRADING CRITERIA

During the final examination, a student can earn a maximum of 30 points.

Grades are assigned based on the following demonstrated levels of knowledge and skills:

- **21–30 points (Excellent)** - *Demonstrates proficient skills in working with scientific literature and biological specimens. Accurately navigates the topography and structural details of organs on anatomical models and cadaveric specimens, correctly naming them. Capable of applying theoretical knowledge to practical clinical scenarios. Proficient in basic dissection techniques using standard medical instruments (e.g., scalpels, forceps). Able to analyze the condition of an organ and draw accurate conclusions regarding its morphological state. Demonstrates effective use of online academic resources.*

Exam Performance: The student must answer all questions on the exam ticket flawlessly and demonstrate a comprehensive, confident grasp of the material when answering supplementary questions.

- **11–20 points (Good)** - *Possesses fundamental skills in working with academic literature. Capable of locating and identifying body parts on anatomical models and naming them correctly. Able to accurately articulate the fundamentals of anatomical terminology and the general patterns of human body structure. Capable of locating and isolating muscles and fascia through dissection.*

Exam Performance: The student answers the primary questions on the exam ticket accurately, but may provide incomplete or slightly inaccurate responses to supplementary questions.

- **6–10 points (Satisfactory)** - *Capable of applying foundational anatomical knowledge. Able to navigate the basic structure of the human body. Knows the major historical stages of anatomical science, its significance for medicine, basic anatomical terminology, and general patterns of human body structure.*

Exam Performance: The student answers the primary questions on the exam ticket but struggles or hesitates when answering supplementary questions.

- **2–5 points (Unsatisfactory / Fail)** - *Unable to isolate or identify key anatomical concepts. Cannot use basic anatomical instruments. Lacks a clear understanding of research methods, the history of anatomy, anatomical terminology, and the general patterns of human body structure. Unable to use professional medical terminology or articulate core concepts. Lacks a clear understanding of how to properly utilize online academic resources.*

Exam Performance: The student struggles to answer the exam ticket questions, requires leading questions (prompts) to respond, and demonstrates poor knowledge when answering supplementary questions.

- **0 points (Fail)** - *Demonstrates no knowledge of the subject.*

Exam Performance: The student fails to answer any question on the initial exam ticket. Even after being offered a second (supplementary) ticket and given preparation time, the student fails to demonstrate any knowledge of the subject.

- **Absence** - *A student who fails to appear for the examination automatically receives 0 points.*

MIDTERM ASSESSMENT GRADING SCALE (Written Test)

1. Each test consists of *N* multiple-choice questions.
2. Questions are presented with predefined answer options; there may be either a single correct answer or multiple correct answers.
3. A specific point value N_o is awarded for each correctly answered question.
4. The total percentage score is calculated as the sum of correct answers across all course modules throughout the academic period.
5. The total final score is the sum of points earned for each individual course module.

The score is calculated using the following formula:

Nb=No×B100*Nb*

Where:
Nb = points awarded for correct answers
No = percentage of correct answers (%)

No=Nx×100/*No*

Where:
N = total number of questions in the test
Nx = number of correct answers in the specific module/section
B =*X*∗ = maximum possible score for testing each course module (see Appendix 4)

The final knowledge assessment result is determined by the following formula:

D=∑Nb×100/40

Where:
D = final score in percentage (%)
∑*Nb* = total sum of points for correct answers across all modules
40 = maximum possible total score for the midterm assessment

Passing Criterion:

To pass the midterm assessment, a student must achieve a minimum of 60% correct answers.

FINAL COURSE ASSESSMENT (EXAMINATION) GRADING SCALE

Exam Ticket Structure:

1. Osteosyndesmology. Skull *(Know)*
2. Myology *(Know)*
3. Splanchnology. Respiratory System. Digestive System. Urinary and Reproductive Systems *(Know)*
4. Heart. Human Cardiovascular System. Central Nervous System. Cranial Nerves. Vessels and Nerves of the Head, Neck, Body Cavities, and Limbs. Lymphatic System. Peripheral and Autonomic Nervous Systems *(Know)*

5. Name and Identify on anatomical models and cadaveric specimens *(Skills and Competencies)*

No	Assessment Criterion	Score (%)
1	Question 1	0 – 15
2	Question 2	0 – 15
3	Question 3	0 – 15
4	Question 4	0-15
5	Question 5	0 – 40
Performance Score (Exam)		**Total Score**

FINAL EXAMINATION ASSESSMENT AND GRADING CRITERIA

During the final examination, a student can earn a maximum of 30 points.

Grades are assigned based on the following demonstrated levels of knowledge and professional competencies:

- **26–30 points (Excellent)** - *Demonstrated Competencies: Proficient skills in working with scientific literature and biological specimens. Accurately navigates the topography and structural details of organs on anatomical models and cadaveric specimens, correctly naming them. Capable of applying theoretical knowledge to practical clinical scenarios. Proficient in basic dissection techniques using standard medical instruments (e.g., scalpels, forceps). Able to analyze the condition of an organ and draw accurate conclusions regarding its morphological state. Applies ethical principles in professional practice. Utilizes medical imaging modalities (X-rays, CT scans, MRI) in practical clinical work. Understands the significance of fundamental anatomical research for both practical and theoretical medicine. Demonstrates effective use of online academic resources.*

Exam Performance Requirements: The student must answer all questions on the exam ticket flawlessly and demonstrate comprehensive, confident mastery of the material when answering supplementary questions.

- **21–25 points (Good)** - *Demonstrated Competencies: Possesses fundamental skills in working with academic literature. Capable of locating and identifying body parts on anatomical models and naming them correctly. Able to accurately articulate the fundamentals of anatomical terminology and the general patterns of human body structure. Capable of locating and isolating muscles, fascia, and major blood vessels through dissection. Prepared to deliver scientific presentations and reports. Confidently identifies anatomical and topographic relationships of organs and body parts in adults, children, and adolescents. Proficient in using basic dissection instruments. Capable of locating and palpating major bony and muscular landmarks on a living human body, mapping the projections of major neurovascular bundles in various body regions, and correctly naming and demonstrating joint movements. Freely applies acquired anatomical knowledge (adult, pediatric, and adolescent) to future professional practice.*

Exam Performance Requirements: The student answers the primary questions on the exam ticket accurately, but may provide incomplete or slightly inaccurate responses to supplementary questions.

- **16–20 points (Satisfactory) -** *Demonstrated Competencies: Capable of applying foundational anatomical knowledge. Able to navigate the basic structure of the human body. Knows the major historical stages of anatomical science, its significance for medicine, basic anatomical terminology, and general patterns of human body structure. Able to use professional medical terminology and articulate core concepts. Capable of locating and isolating individual organs through dissection. Understands the fundamental principles of development and function of human organs. Able to work with the medical-anatomical conceptual framework in practical settings. Capable of locating and palpating major bony and muscular landmarks on a living human body. Knows the basic approaches to structuring scientific research. Understands the applied value of acquired anatomical knowledge.*

Exam Performance Requirements:

The student answers the primary questions on the exam ticket but struggles or hesitates when answering supplementary questions.

- **10–15 points (Unsatisfactory / Fail)-** *Demonstrated Deficiencies: Unable to isolate or identify key anatomical concepts. Cannot use basic anatomical instruments. Lacks a clear understanding of research methods, the history of anatomy, anatomical terminology, and the general patterns of human body structure. Unable to use professional medical terminology or articulate core concepts. Lacks a clear understanding of how to properly utilize online academic resources. Incapable of performing practical tasks in specific professional situations. Unable to work with primary sources and scientific literature. Cannot identify organs and body parts on medical imaging modalities.*

Exam Performance: The student struggles to answer the exam ticket questions, requires leading questions (prompts) to respond, and demonstrates poor knowledge when answering supplementary questions.

- **0 points (Fail) -** *Demonstrates no knowledge of the subject.*

Exam Performance: The student fails to answer any question on the initial exam ticket. Even after being offered a second (supplementary) ticket and given preparation time, the student fails to demonstrate any knowledge of the subject.

- **Absence-** *A student who fails to appear for the examination automatically receives 0 points.*