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Federal State Budget Educational Institution
of Higher Education
Pacific State Medical University
of the Ministry of Health of the Russian Federation

APPROVED BY

Head of the Department
of Human Anatomy
_____ / Chertok V.M./
"4th" of April 2025

SUBJECT GUIDE FOR TEACHERS AND STUDENTS FOR

Б1.О.09 Anatomy

(Name of discipline)

Specialty	**31.05.01 General Medicine for international students (in English)** (code, name)
Degree	Specialist's degree
Profile	02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system)
Mode of study	**Full-time**
Period of mastering the BEP	**6 years** (nominal length of study)
Department	of Human Anatomy

Vladivostok, 2025

Subject guide for teachers and students for **Б1.О.09 Anatomy** is based on:

1) Federal State Educational Standard of Higher Education for the specialty approved by the Order No. 988 of Ministry of Science and Higher Education of the Russian Federation
dated August 12, 2020.

2) Curriculum for the specialty 31.05.01 General Medicine for international students (in English), profile 02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system),
approved by the Academic Council of FSBEI HE PSMU of the Ministry of Health of Russia Report No. 8/24-25 dated March 31, 2025.

Subject guide for teachers and students for the discipline were developed by the writing team of the Department of Human Anatomy of the FSBEI HE PSMU of the Ministry of Health of Russia, under the guidance of the head of the department, Doctor of Medical Sciences, professor Chertok V.M.

Developed by:

Assistant professor	Candidate of Medical Sciences	Alekseeva.E.O.
(position held)	(academic degree, academic title)	(full name)

1. GENERAL PROVISIONS

Subject guide for **Б1.О.09 Anatomy** is a set of recommendations and explanations that facilitate to optimal organization of mastering this discipline.

Regular analysis of lecture materials and work with end-of-the-text questions are necessary for better understanding of the material and systematization of knowledge of **Б1.О.09 Anatomy**. Particular attention should be paid to emerging questions, confusing terms, and conflicts of points of view during the independent review of the lecture material. If necessary, a student should contact the teacher for advice. Lecture material streamlines students' thinking, while practical classes provide deeper insight into the material of the discipline.

Special attention should be paid to the content of the main provisions and conclusions, explanation of phenomena and facts, and clarification of the practical application of theoretic aspects of topic when preparing for a practical class. During this process students should aim to understand and remember the main provisions of the material under consideration, examples provided, as well as understand the illustrative material.

Collections of assessment tools are used to organize independent study of topics (questions) of the discipline.

Independent work of students is facilitated by the following:

1. availability and accessibility of the necessary educational and reference material;
2. a system of regular quality control of completed independent work;
3. availability of teacher's advice.

Subject guides for self-study are presented as literary sources. Subject guides for independent work of students include a list of library resources of the educational institution and other materials accessible to students.

Independent work is a type of in-person extracurricular work of teachers and students of **Б1.О.09 Anatomy**. Control of independent work is conducted by the leading teacher. Evaluation of independent work results is taken into account when conducting interim examination of students throughout the **Б1.О.09 Anatomy** course.

Continuous assessment during the **Б1.О.09 Anatomy** course is implemented in order to check indicators of achieving competencies, to stimulate students' academic work, and improve methods of mastering new knowledge. Continuous assessment during the **Б1.О.09 Anatomy** course is conducted during the semester to assess all types and sections of the academic discipline that encompass the competencies developed by the discipline: classroom questioning, working with tests, working with online resources, participating in the student Olympiads, and writing term papers. Continuous assessment of students' knowledge and results of their preparation for practical classes is conducted during every class session.

Interim assessment aims to determine the level of mastery of competency indicators. It is conducted in the exam format after the student has mastered all sections of **Б1.О.09 Anatomy** and takes into account learning outcomes for all types of student work over the entire period of mastering the **Б1.О.09 Anatomy** course.

Time allotted for interim assessment is indicated in the schedule.

Assignments given during practical classes, as well as assignments aimed to prepare students for continuous and interim assessment, are included in the collection of assessment tools for **Б1.О.09 Anatomy**. If necessary, students should contact the teacher for advice. It is necessary to thoroughly think over questions that need clarification before seeking teacher's advice.

2. SUBJECT GUIDES FOR LECTURE CLASSES

Table 1. Subject Guides for **Б1.О.09 Anatomy** Lectures

Topic No.1 Introduction to human anatomy. Contents and objectives of anatomy	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about Anatomy as a subject/discipline, its purpose and objectives, and the place of anatomy in the medical education system; 2. identify types of anatomy; 3. examine methods of studying anatomy; 4. go over general principles of the human body structure.	
Lecture plan, order of presentation of its sections: 1. Anatomy as a science, its objectives. Types of anatomy 2. History of anatomy 3. Methods of studying anatomy 4. Principles of the systemic organization of the human body 5. Anatomical terminology. Planes and axes	
Recommended reading: 1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru 2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/	
Topic No.2 Functional anatomy of the passive part of the musculoskeletal system. Skeleton	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about principles of the human skeleton structure; 2. analyse skeleton classification; 3. examine the functions of the passive part of the musculoskeletal system; 4. go over the development of the human skeleton	
Lecture plan, order of presentation of its sections: 1. General characteristics of the musculoskeletal system 2. Bone structure 3. Skeleton: classification, structure, functions 4. Skeleton development 5. Skull: general data, development, age- and sex-related, individual, and racial characteristics	
Recommended reading: 1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru 2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/	
Topic No.3 Functional anatomy of the passive part of the musculoskeletal system. Anatomy of the skull	

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the structure of individual bones of the cranial and facial parts of the skull;
2. examine changes in the bones of the skull that occurat different age periods.

Lecture plan, order of presentation of its sections:
1. The skeleton of the cranial part of the skull
2. The skeleton of the facial part of the skull
3. Age-related changes in the bones of the skull

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.4 The study of bone connections – syndesmology

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the principles of bone connections classification;
2. define relevant terminology: fibrous joints, synovial joints, and cartilaginous joints;
3. examine in detail the structure of the joint (main and auxiliary structures).

Lecture plan, order of presentation of its sections:
1. Types of bone connections and their function
2. Fibrous joints: classification, aspects of structure and function
3. Synovial joints: general principles of structure

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.5 The study of bone connections. Joints

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. analyze the classification of synovial joints by the number and shape of the articular surfaces;
2. analyze the biomechanical classification of joints;
3. examine the development of joints in philo- and ontogenesis.

Lecture plan, order of presentation of its sections:
1. Types of discontinuous joints
2. Classification, features of the structure and functions of joints

3. Development of joints

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.6 Functional morphology of the active part of the musculoskeletal system. The study of muscles – myology

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the evolutionary structures that ensure the body's motor functions;
2. discuss the types of muscle tissue;
3. examine the levels of organization of skeletal muscle;
4. go over the philo-ontogenesis of muscles.

Lecture plan, order of presentation of its sections:
1. Evolution of structures that ensure the body's motor functions
2. The muscular system
3. Skeletal muscles: muscle as an organ
4. Muscle development

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.7 Skeletal muscles. Fundamentals of muscle biomechanics

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. examine the classification of skeletal muscles;
2.examine the connective tissue formations that ensure the work of the skeletal muscles;
3. tell students about the dynamic and static work of the muscles of the body
4. examine the factors that ensure muscle strength.

Lecture plan, order of presentation of its sections:
1. Classification of skeletal muscles
2. Auxiliary apparatus of the skeletal muscles
3. The concept of muscle work and strength
4. Kinematic action of muscles
5. Relationship between muscles and joints

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru

2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/	
Topic No.8 Functional morphology of the active part of the musculoskeletal system. Muscles of the trunk	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the specific issues of the structure of the muscles of the back, chest, and abdomen; 2. analyze the topographic and anatomical structures of the trunk; 3. examine the fascia of the back, chest, and abdomen.	
Lecture plan, order of presentation of its sections: 1. Muscles and fascia of the back 2. Muscles and fascia of the chest 3. Muscles and fascia of the abdomen	
Recommended reading: 1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru 2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/	
Topic No.9 Functional morphology of the active part of the musculoskeletal system. Muscles of the upper and lower extremities	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the specifics of the structure of the muscles of the shoulder girdle and the upper limb; 2. tell students about the specifics of the structure of the muscles of the shoulder girdle and the lower limb; 3. examine the topographic and anatomical structures of the upper and lower limbs.	
Lecture plan, order of presentation of its sections: 1. The muscles of the shoulder girdle and the upper limb 2. The muscles of the pelvic girdle and the lower limb 3. The auxiliary apparatus of the limb muscles	
Topic No.10 Functional morphology of the musculoskeletal system. Age-related changes in bones, joints, and muscles	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about age-related changes in the bones of the skeleton; 2. examine age-related changes in the joints; 3. examine changes in the structure of muscles at different ages.	

Lecture plan, order of presentation of its sections:
1. Age-related changes in the skeleton
2. Age-related changes in the joints
3. Age-related changes in skeletal muscles

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.11 Functional anatomy of the nervous system. The study of the nervous system – neurology. The spinal cord

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the function of the nervous system and give its classification;
2. analyze the structure of a neuron;
3. examine the reflex arc as the morphological basis of the reflex activity of the body;
4. tell students about the general structure of the spinal cord.

Lecture plan, order of presentation of its sections:
1. General characteristics of the nervous system
2. Structural elements of the nervous system
3. Morphological foundations of the nervous system
4. Structure of the spinal cord

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.12 Functional anatomy of the brain: the brainstem and the cerebrum

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the parts of the brain;
2. analyze the structure of the brain stem;
3. tell students about the localization of functions in the cortex of the cerebral hemispheres;
4. analyze the structure and function of the subcortical nuclei;
5. examine the structure of the meninges of the brain and the circulation of cerebrospinal fluid .

Lecture plan, order of presentation of its sections:
1. Anatomy of the medulla oblongata. The posterior brain. The cerebellum
2.The structure of the midbrain and diencephalon
3.The anatomy of the telencephalon
4.Fissures, gyri and localization of functions in the cerebral cortex
5.Subcortical nuclei
6.Meninges of the brain

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.13 Functional anatomy of the somatic and autonomic nervous system

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the structure of the peripheral nervous system;
2. examine the structure of the cranial nerves;
3. examine the structure of the cervical, brachial, and lumbosacral plexus;
4. analyze the features of the structure of the autonomic nervous system.

Lecture plan, order of presentation of its sections:
1. General aspects of the structure of the peripheral nervous system
2. Cranial nerves
3. Spinal nerves
4. The autonomic nervous system

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.14 Functional anatomy of the sensory systems – esthesiology. Primary sensory analyzers

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. analyze the structure of the organ of vision;
2. analyze the structure of the organs of smell and taste.

Lecture plan, order of presentation of its sections:
1. The organ of vision
2. The organ of smell
3. The organ of taste

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.15 Functional anatomy of the sensory systems – esthesiology. Secondary sensory analyzers

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the structure of the organ of hearing and the mechanism of sound production;
2. examine the structure of the vestibule and semicircular canals of the inner ear;
3. examine the structure of the organ of touch.

Lecture plan, order of presentation of its sections:
1. The organ of hearing
2. The organ of balance
3. The organ of touch

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.16 Introduction to angiology. Functional anatomy of the heart

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the morphofunctional structure of the heart and its topography;
2. analyze the features of the structure of the atria and ventricles of the heart, the valve apparatus;
3. examine the structure of the heart wall and the conducting system of the heart.

Lecture plan, order of presentation of its sections:
1.External structure of the heart
2. Cavities of the heart
3. Valve apparatus of the heart
4. Structure of the heart wall
5. Conducting system of the heart

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.17 Functional anatomy of the vascular and immune systems

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about general aspects of the arterial system;
2. tell students about general aspects of the venous system;
3. tell students about general aspects of the lymphatic system.

Lecture plan, order of presentation of its sections:
1. General aspects of the arterial system
2. General aspects of the venous system
3. General aspects of the lymphatic system

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.18 Functional anatomy of the arterial system

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. examine the specifics of the arteries of the head and neck;
2. examine the branches of the thoracic and abdominal aorta;
3. examine the arteries of the upper and lower limbs.

Lecture plan, order of presentation of its sections:
1. Branches of the aortic arch
2. Branches of the thoracic part of the aorta
3. Branches of the abdominal part of the aorta

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.19 Functional anatomy of the venous system

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. examine the tributaries of the superior vena cava;
2. examine the tributaries of the inferior vena cava;
3. analyze the portal vein system, porto-caval and cava-caval anastomoses.

Lecture plan, order of presentation of its sections:
1.Tributaries of the superior vena cava
2.Tributaries of the inferior vena cava
3.Portal vein

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.20 Functional anatomy of the lymphatic system	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the features of the lymphatic system structure; 2. define the immune system; 3. examine the anatomy of the primary and secondary organs of the immune system.	
Lecture plan, order of presentation of its sections: 1.Lymphatic system 2.Immune system 3. Features of the structure of the microcirculatory bed	
Recommended reading: 1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru 2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/	
Topic No.21 Introduction to splanchnology	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the principle of the structure of internal organs; 2. define relevant terminology: parenchymal organs, hollow organs.	
Lecture plan, order of presentation of its sections: 1. General concepts about the structure of internal organs 2. Parenchymal organs 3. Hollow organs	
Recommended reading: 1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru 2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/	
Topic No.22 Functional anatomy of the respiratory system	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the structure of the upper respiratory tract and the larynx; 2. examine the structure of the lungs; 3. analyze the structure of the pleura and pleural sinuses; 4. examine the structure of the mediastinum.	

Lecture plan, order of presentation of its sections:
1. The nose, nasal cavity, and nasopharynx, and the structure of the larynx
2. The anatomy of the lungs
3. The pleura and the pleural cavity
4. The mediastinum

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.23 Functional anatomy of the digestive system (gastrointestinal tract)

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the classification of the digestive system organs;
2. examine the structure of the digestive tract.

Lecture plan, order of presentation of its sections:
1. Classifications of the digestive organs
2. Morphofunctional features of the structure of the digestive organs (hollow organs)
3. Large glands of the digestive system

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.24 Functional anatomy of the glands of the digestive system (gastrointestinal tract)

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. examine the anatomy of the salivary glands;
2. analyze the structure of the liver;
3. examine the structure of the pancreas.

Lecture plan, order of presentation of its sections:
1. Classifications of the digestive organs
2. Morphofunctional features of the structure of the digestive organs (hollow organs)
3. Large glands of the digestive system

Recommended reading:
1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013.
URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.25 Anatomy and topography of the peritoneum	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the peritoneum, the abdominal cavity, and the retroperitoneal space; 2. tell students about the relationship of the peritoneum and the internal organs; 3. examine the levels of the abdominal cavity, peritoneal sacs, foramina, sinuses, and recesses.	
Lecture plan, order of presentation of its sections: 1. General aspects of the anatomy of the peritoneum 2. The upper level of the peritoneal cavity 3. The middle level of the peritoneal cavity 4. The lower level of the peritoneal cavity	
Recommended reading: 1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru 2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/	
Topic No.26 Functional anatomy of the urinary and endocrine systems	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the structure of the kidney; 2. examine the structure of the urinary organs; 3. analyze the anatomy of the perineum; 4. examine the classification of the endocrine apparatus.	
Lecture plan, order of presentation of its sections: 1. The urine-forming system 2. The urinary organs 3. The anatomy of the perineum 4. The endocrine apparatus	
Recommended reading: 1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru 2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/	
Topic No.27 Functional anatomy of the male reproductive system	
Duration of the lecture (in academic hours):	2

Purpose of the lecture: 1. analyze the structure of the external genital organs; 2. examine the anatomy of the internal genital organs.
Lecture plan, order of presentation of its sections: 1.External genital organs 2.Internal genital organs
Recommended reading: 1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru 2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/

Topic No.28 Functional anatomy of the female reproductive system	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. analyze the structure of the external genital organs; 2. examine the anatomy of the internal genital organs.	
Lecture plan, order of presentation of its sections: 1.External genital organs 2.Internal genital organs	
Recommended reading: 1. Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru 2. Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource]. 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/	

3. SUBJECT GUIDES FOR PRACTICAL CLASSES

Table 2. Subject Guides for Practical **Б1.О.09 Anatomy**

Topic No.1 Introduction to osteology and arthrosynodesmology. Functional anatomy of the trunk skeleton and bone connections	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. teach students to identify the bones of the trunk skeleton, the types of connections of the skeleton bones and the elements of the structure of joints; 2. during the discussion, outline the main elements of the structure of the bones of the trunk and the connections of the axial skeleton; 3. thoroughly go over the ligaments and types of movement in the joints of the trunk, taking into account the axes of rotation; 4. develop an anatomical glossary on the topic.	

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

Recommended reading:
- Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru
- Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource] . 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/
URL: http://biblioclub.ru/
- Human Anatomy: Atlas: in 3 volumes [Electronic course] / G.L. Bilich, V.A. Kryzhanovsky, V.N. Nikolenko. M.: GEOTAR-Media, 2011. - 696 p. URL: http://www.studmedlib.ru

Supplementary:
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- Sinelnikov, A.Ya. Atlas of Human Anatomy in 4 volumes. [Electronic resource]. "New Wave". 2014. 246 p. (EBS)

Topic No.2 Functional anatomy of the bones and joints of the shoulder girdle and upper limb

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. teach students to identify the bones of the shoulder girdle and upper limb and to find the main anatomical elements of these bones;
2. examine the structure of the shoulder joint (bones that form the shoulder joint, features of the articulating surfaces, capsule, ligaments of the shoulder joint, and axes of rotation);
3. examine the structure of the elbow joint (bones that form the elbow joint, features of the articulating surfaces, capsule, ligaments of the elbow joint, and axes of rotation);
4. examine the structure of the wrist joint (bones forming the wrist joint, features of articulating surfaces, capsule, ligaments of the wrist joint, axes of rotation);
5. teach students to use anatomical terminology (in English and Latin) on the topic;
6. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.3 Functional anatomy of the bones and joints of the pelvis and lower limb

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. teach students to identify the bones of the pelvis and the lower limb and to find the main anatomical elements of these bones;
2. analyze the structure of the hip joint (the bones that form the hip joint, the features of the articulating surfaces, the capsule, the ligaments of the hip joint, and the axes of rotation);
3. analyze the structure of the knee joint (the bones that form the knee joint, the features of the articulating surfaces, the capsule, the ligaments of the knee joint, and the axes of rotation);
4. analyze the structure of the ankle joint (bones that form the ankle joint, features of the articulating surfaces, capsule, ligaments of the wrist joint, and axes of rotation);
5. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.4 Knowledge assessment (bones of the trunk and limbs and their joints) using anatomical preparations

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. assess students' knowledge of the bones of the trunk and limbs and their joints;
2. assess students' mastery of anatomical terminology (in English and Latin) used in the study of these systems.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

Recommended reading:
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Topic No.5 Functional anatomy of the bones of the neurocranium

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. teach students to identify the bones of the neurocranium;
2. examine the main anatomical elements of these bones, openings, canals;
3. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.6 Functional anatomy of the facial bones

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. teach students to identify the bones of the facial part of the skull;
2. examine the main anatomical elements of these bones, openings, canals;
3. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.7 Functional anatomy of the skull as a whole

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. teach students to identify the bones of the facial and brain parts of the skull, the boundaries between the facial and brain parts of the skull, and between the neocranium and base of the skull;
2. examine the main structural elements of the skull parts, the cranial fossae of the internal base and lateral surface of the skull, the orbit, the nasal cavity, and their connections;
3. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.8 Functional anatomy of the joints of the bones of the skull and the connection of the skull and the spine

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. go over the skull sutures;
2. examine the structure of the temporomandibular joint (bones forming this joint, features of the articulating surfaces, capsule, ligaments of the temporomandibular joint, axes of rotation);
3. examine the structure of the atlanto-occipital joint (bones forming this joint, features of the articulating surfaces, capsule, ligaments of the atlanto-occipital joint, axes of rotation);
4. study patterns of;
5. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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- Sinelnikov, A.Ya. Atlas of Human Anatomy in 4 volumes. [Electronic resource]. "New Wave". 2014. 246 p. (EBS)

Topic No.9 Knowledge assessment (bones of the skull and their joints) using anatomical preparations

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. assess students' knowledge of the structure of the bones of the head, trunk, and extremities, as well as their connections;
2. assess students' mastery of anatomical terminology (in English and Latin) in the sections of osteology and arthrosynodesmology.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

Topic No.10 Functional anatomy of the muscles of the head and neck. Topography of the neck, fascia, and fascial spaces of the neck

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge on the anatomy of the muscles of the head and neck;
2. during the discussion, outline the main functions of the muscles of these areas;
3. thoroughly go over the fasciae of these areas and the fascial spaces;
4. develop an anatomical glossary on the topic

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.11 Functional anatomy of the muscles of the back, chest, and abdomen. The diaphragm. Weak points of the abdominal wall. The sheath of rectus abdominis muscle. The inguinal canal

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the anatomy of the muscles of the back, chest, and abdomen;
2. during the discussion, outline the main functions of the muscles in these areas;
3. thoroughly go over the structure of the inguinal canal and the sheath of rectus abdominis muscle;
4. develop an anatomical glossary on the topic

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.12 Functional anatomy of the muscles, fascia, and topography of the shoulder girdle and upper limb	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge of the anatomy of the muscles of the shoulder girdle and the upper limb; 2. during the discussion, outline the main functions of the muscles of these areas; 3. examine the fasciae and fibrous and synovial sheaths of the upper limb; 4. analyze the topography of the shoulder girdle and the upper limb; 5. develop an anatomical glossary on the topic.	
Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.	
Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.	
Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.	
Recommended reading: - Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru - Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource] . 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/ - Human Anatomy: Atlas: in 3 volumes [Electronic course] / G.L. Bilich, V.A. Kryzhanovsky, V.N. Nikolenko. M.: GEOTAR-Media, 2011. - 696 p. URL: http://www.studmedlib.ru Supplementary: - Atlas of Normal Human Anatomy / M.R. Sabin, D.B. Nikityuk, E.V. Shvetsov. Moscow: MED-press-inform, 2009. - Sinelnikov, A.Ya. Atlas of Human Anatomy in 4 volumes. [Electronic resource]. "New Wave". 2014. 246 p. (EBS)	
Topic No.13 Functional anatomy of the muscles, fascia, and topography of the pelvis and lower limb	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge of the anatomy of the muscles of the pelvis and lower limb; 2. during the discussion, outline the main functions of the muscles of these areas; 3. examine the fasciae and fibrous and synovial sheaths of the lower limb; 4. analyze the topography of the pelvis and lower limb; 5. develop an anatomical glossary on the topic.	
Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.	
Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.	

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.14 Knowledge assessment using anatomical preparations and test on myology

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. assess students' knowledge of myology;
2. assess students' mastery of anatomical terminology (in English and Latin) used in the study of these systems.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.15 Functional anatomy of the midbrain (mesencephalon) and interbrain (diencephalon)

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the anatomy of the mesencephalon and diencephalon;
2. during the discussion, outline the structure of the white and gray matter of the mesencephalon and diencephalon;
3. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.16 Functional anatomy of the endbrain (telencephalon)

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the anatomy of the telencephalon;
2. during the discussion, outline the sulci and gyri of the cerebral hemispheres, and the localization of functions in the cerebral cortex;
3. thoroughly go over the structure of the basal ganglia of the telencephalon;
4. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.17 The meninges and spaces between the meninges of the brain and spinal cord. Cerebrospinal fluid circulation. Blood vessels of the brain

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the meninges of the brain and spinal cord and the spaces between them;
2. examine the sinuses of the dura mater of the brain;
3. examine the cisterns of the subarachnoid space;
4. examine the blood supply of the brain;
5. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

Recommended reading:
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Topic No.18 Functional anatomy of the sensory organs. Functional anatomy of the neural pathways

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the structure of the organ of vision;
2. consolidate acquired knowledge of the structure of the organ of hearing and equilibrium;
3. examine the structure of the organ of smell;
4. analyze neural pathways;
5. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.19 Knowledge assessment (CNS) using anatomical preparations

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. assess students' knowledge of CNS;
2. assess students' mastery of anatomical terminology (in English and Latin) used in the study of this systems.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

Topic No.20 Functional anatomy of the cranial nerves

Duration of the practical class (in academic hours):
Purpose of the practical class: 1. consolidate acquired knowledge of the I-XII pairs of cranial nerves; 2. during the discussion, outline main definitions and concepts related to the I-XII pairs of cranial nerves; 4. study patterns of cranial nerves structure; 5. develop an anatomical glossary on the topic.
Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.
Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.
Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.
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Topic No.21 Functional anatomy of the spinal nerves

Duration of the practical class (in academic hours):	4

Purpose of the practical class: 1. consolidate acquired knowledge of the anatomy of the spinal nerves; 2. during the discussion, outline definitions and concepts related to the spinal nerve, its branches, functional anatomy of the cervical plexus and the brachial plexus, intercostal nerves; 3. thoroughly go over lumbar plexus and the sacral plexus; 4. study patterns of their structure; 5. develop an anatomical glossary on the topic.
Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.
Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.
Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.22 Functional anatomy of the autonomic nervous system. Sympathetic and parasympathetic nervous systems. Autonomic nerve plexuses

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the anatomy of the autonomic nervous system;
2. thoroughly go over definitions and concepts of the anatomy of the autonomic nervous system;
4. study patterns of its structure;
5. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.23 Knowledge assessment using anatomical preparations and test on neurology

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. assess students' knowledge of neurology;
2. assess students' mastery of anatomical terminology (in English and Latin) used in the study of this systems.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.24 Functional anatomy of the heart. Pulmonary circulation

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge on the anatomy of the heart;
2. during the discussion, outline patterns of the heart structure;
3. examine the vessels of the pulmonary circulation;
4. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.25 Functional anatomy of the systemic circulation: arteries

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of systemic circulation, branches of the descending aorta;
2. during the discussion, outline blood supply to the head and neck;
3. examine arteries of the upper limb;
4. examine the branches of the descending part of the aorta
5. study patterns of blood supply to the lower limbs;
6. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.26 Functional anatomy of the venous and lymphatic systems

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the anatomy of the venous and lymphatic systems;
2. during the discussion, outline the main aspects of circulation of these systems;
3. study patterns of their structure;
4. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.27 Functional anatomy of the respiratory system (nasal cavity, pharynx, larynx)

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge on the anatomy of the upper airways and larynx;
2. during the discussion, outline the main features of their function;
3. study patterns of the structure of these organs;
4. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.28 Functional anatomy of the respiratory system (trachea, bronchi, lungs, pleura). Mediastinum

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge on the anatomy of the trachea, bronchi, lungs, and pleura;
2. during the discussion, outline the main features of their function;
3. thoroughly go over definition and concept of the mediastinum;
4. study patterns of the structure of these organs;
5. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.29 Knowledge assessment using anatomical preparations (respiratory system)

Duration of the practical class (in academic hours):	4

Purpose of the practical class: 1. assess students' knowledge of the respiratory system and mediastinum; 2. assess students' mastery of anatomical terminology (in English and Latin) used in the study of the respiratory system.
Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.
Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.
Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.
Topic No.30 Functional anatomy of the digestive system (oral cavity, esophagus, stomach, intestines)
Duration of the practical class (in academic hours):
Purpose of the practical class: 1. consolidate acquired knowledge on the anatomy of the digestive system; 2. during the discussion, outline the main features of their function; 3. study the patterns of structure of these organs; 4. develop an anatomical glossary on the topic.
Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.
Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.
Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.
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Topic No.31 Functional anatomy of the glands of the digestive system (liver, gallbladder, biliary tract, pancreas)

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge on the anatomy of the glands of the digestive system;
2. during the discussion, outline the main features of their function;
3. study the patterns of structure of these organs;
4. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.32 Peritoneum. Peritoneal cavity

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the structure of the peritoneum, abdominal cavity, peritoneal cavity, retroperitoneal space;
2. examine the structures of the peritoneum: peritoneal sacs, foramina, sinuses, recesses, mesenteries, omentums, and ligaments;
5. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.33 Knowledge assessment using anatomical preparations (digestive system) Functional anatomy of the urinary system. Male urethra

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. assess students' knowledge of the digestive system;
2. assess students' mastery of anatomical terminology (in Engilsh and Latin) used in the study of the digestive system;
3. consolidate acquired knowledge of the urinary system;
2. during the discussion, outline the main features of their structure;
3. thoroughly go over definitions and concepts of;
4. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.34 Functional anatomy of the male reproductive organs

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the anatomy of the male reproductive organs;
2. during the discussion, outline the main features of their structure;
3. study patterns of their structure;
4. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.35 Functional anatomy of the female reproductive organs. Perineum

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the anatomy of the female reproductive organs, anatomy of the male and female perineum;
2. during the discussion, outline the main features of their structure;
3. study patterns of their structure;
4. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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Topic No.36 Functional anatomy of the endocrine glands

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. consolidate acquired knowledge of the anatomy of the endocrine system;
2. during the discussion, outline the main aspects of its structure;
3. study patterns of its structure;
5. develop an anatomical glossary on the topic.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.

Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.

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- Human Anatomy: Atlas: in 3 volumes [Electronic course] / G.L. Bilich, V.A. Kryzhanovsky, V.N. Nikolenko. M.: GEOTAR-Media, 2011. - 696 p. URL: http://www.studmedlib.ru

Supplementary:
- Atlas of Normal Human Anatomy / M.R. Sabin, D.B. Nikityuk, E.V. Shvetsov. Moscow: MED-press-inform, 2009.
- Sinelnikov, A.Ya. Atlas of Human Anatomy in 4 volumes. [Electronic resource]. "New Wave". 2014. 246 p. (EBS)

Topic No.37 Knowledge assessment using anatomical preparations (genitourinary and endocrine systems)

Duration of the practical class (in academic hours):	4

Purpose of the practical class: 1. assess students' knowledge of the urinary, reproductive, and endocrine systems; 2. assess students' mastery of anatomical terminology (in English and Latin) used in the study of these systems.
Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.
Independent work of the student: working with study materials, models, bone specimens, and museum anatomical specimens.
Methods of evaluation of acquired knowledge and skills: discussion, classroom questioning, working with tests, working with case studies.
Recommended reading: - Human Anatomy: Textbook in 2 volumes: textbook. / edited by M.R. Sapin. Moscow: GEOTAR-Media, 2022. URL: http://www.studentlibrary.ru - Gayvoronsky, I.V. Normal Human Anatomy: textbook. for medical universities: in 2 volumes [Electronic resource] . 8th edition, revised and expanded. SPb: SpetsLit, 2013. URL: http://books-up.ru/ URL: http://biblioclub.ru/ - Human Anatomy: Atlas: in 3 volumes [Electronic course] / G.L. Bilich, V.A. Kryzhanovsky, V.N. Nikolenko. M.: GEOTAR-Media, 2011. - 696 p. URL: http://www.studmedlib.ru Supplementary: - Atlas of Normal Human Anatomy / M.R. Sabin, D.B. Nikityuk, E.V. Shvetsov. Moscow: MED-press-inform, 2009. - Sinelnikov, A.Ya. Atlas of Human Anatomy in 4 volumes. [Electronic resource]. "New Wave". 2014. 246 p. (EBS)

4. GUIDELINES FOR CONTINUOUS AND INTERIM ASSESSMENT

Table 3. Guidelines for Conducting Continuous and Interim Assessment during the **Б1.О.09 Anatomy** Course

Type of assessment	Assessment format
Continuous assessment	- conducting and evaluating oral or written quizzes during lectures and practical classes; - assessment and evaluation of completion and results of assignments given during practical classes; - assess and evaluate completion and results of individual assignments and exam tasks given during practical classes; - assessment and evaluation of lecture notes quality; - assessment and evaluation of completion and results of tests.
Interim certification	is conducted in the oral exam format; it allows to assess the development of students' competencies correlating with types of professional activity.

5 ASPECTS OF THE IMPLEMENTATION OF THE COURSE FOR STUDENTS WITH DISABILITIES AND SPECIAL NEEDS

5.1. Availability of accessible environment

For students with disabilities and special needs, if a written application is submitted, lectures and practical classes are carried out taking into account health limitations, individual capabilities and medical status (hereinafter referred to as individual characteristics) of the student. Compliance with the following general requirements is ensured: teaching aids for collective and individual use are provided, required technical assistance is provided by an assistant, buildings and premises where lectures and practical classes are taking place meet accessibility requirements, other arrangements lack of which makes it impossible or difficult to master the discipline are made.

5.2. Compliance with general requirements

When lectures and practical classes are carried out at the written application of the student, the following general requirements are met: lectures and practical classes for students with disabilities and special needs take place at the same location as for students who do not have disabilities, if this does not cause difficulties for students; an assistant (assistants), who provide(s) students with the necessary technical assistance taking into account individual characteristics of the student, is (are) provided; necessary teaching aids are provided, taking into account individual characteristics of the student.

5.3. Availability of the internal policies and procedures of FSBEI HE PSMU of the Ministry of Health of Russia to students with disabilities in a form accessible to them.

All internal policies and procedures of FSBEI HE PSMU of the Ministry of Health of Russia concerning the discipline are made available to students with disabilities in a form accessible to them.

5.4. Increase in the duration of interim assessment of students with disabilities and special needs in relation to the established duration

Format of the interim assessment of academic performance within the scope of the discipline for students with disabilities and special needs is selected taking into account individual characteristics (orally, by writing on paper, by typing on a computer, as a test, etc.). The duration of the interim assessment in relation to the established duration is increased at the written application of the student with disabilities. Time limit for the student's preparation for the test is increased by at least 0.5 hours

6. STAFFING REQUIREMENTS OF THE DISCIPLINE

Academic teaching personnel that ensure the implementation of the discipline education process meet the requirements of the Federal State Educational Standard of Higher Education for the 31.05.01 General Medicine specialty; list of the aforementioned personnel is available on the website of the educational organization.