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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 Human anatomy. Head and neck anatomy

(Name of discipline)

Specialty	**31.05.03 Dentistry for international students (in English)** (code, name)
Degree	Specialist's degree
Profile	02 "Healthcare" (in the field of providing health care in patients with dental pathology)
Mode of study	**Full-time**
Period of mastering the BEP	**5 years** (nominal length of study)
Department	of Human Anatomy

Vladivostok, 2025

Subject guide for teachers and students for **Б1.О.09 Human anatomy. Head and neck 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 31.05.03 Dentistry for international students (in English), profile 02 "Healthcare" (in the field of providing health care in patients with dental pathology), 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 Human anatomy. Head and neck 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 Human anatomy. Head and neck 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 and subject guides for the students. 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 Human anatomy. Head and neck 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 Human anatomy. Head and neck anatomy** course.

Continuous assessment during the **Б1.О.09 Human anatomy. Head and neck 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.06 Chemistry** 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 Human anatomy. Head and neck anatomy** and takes into account learning outcomes for all types of student work over the entire period of mastering the **Б1.О.09 Human anatomy. Head and neck 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 Human anatomy. Head and neck 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 Human anatomy. Head and neck 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 contents and objectives of anatomy; 2. define anatomical axes and planes; 3. examine methods of studying anatomy.	
Lecture plan, order of presentation of its sections: 1. Methods of studying anatomy 2. Types of anatomy and its objectives 3. Individual variants of the structure of the body 4. Types of body structure 5. Anatomical terminology 6. Planes and axes	
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ Textbook 2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/	
Topic No. 2 Principles of the systemic organization of the human body	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the general principles of the human and animal body structure; 2. define relevant terminology: an organism, an organ, a system, and an organ apparatus, as well as philo- and ontogenesis; 3. examine the types of body structure and individual variations of the human body.	
Lecture plan, order of presentation of its sections: 1. General principles of the human and animal body structure 2. The organism and its constituent elements 3. Levels of organization of living matter 4. Ontogenesis	
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ Textbook 2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/	
Topic No. 3 Functional anatomy of the passive part of the musculoskeletal system. Skeleton. Bone as an organ	
Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the stages of bone development and their classification;
2. define relevant terminology: osteon;
3. examine the elements of bone tissue structure.

Lecture plan, order of presentation of its sections:

1. Structure of bone tissue
2. Development of bones
3. Bone as an organ
4. Classification of bones
5. Classification of the skeleton
6. Age-related features of bone tissue

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
Textbook
2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/

Topic No. 4 Functional anatomy of the passive part of the musculoskeletal system. Arthrosyndesmology

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the types of bone connections;
2. define relevant terminology: syndesmosis, synchondrosis, and synostosis;
3. examine the functions of joints.

Lecture plan, order of presentation of its sections:

1. Classification of bone connections
2. Fibrous joints: classification, structure, and functions
3. Synovial joints
4. Functions of joints
5. Phylogenesis

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
Textbook
2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/

Topic No. 5 Functional anatomy of the passive part of the musculoskeletal system. Anatomy of the skull. Developmental, individual, age- and sex-related characteristics of the cerebral skull (neurocranium)

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the structure and development of the skull bones;
2. examine individual, sex- and age-related features of the cranium.

Lecture plan, order of presentation of its sections:

1. Classification of the skull bones
2. Development of the skull in philo- and ontogenesis
3. Features of the structure of the bones of the vault and base of the skull
4. Individual features of the shape of the skull
5. Sex features of the skull structure
6. Age features of the bones of the skull

Recommended reading:

1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
Textbook
2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/

Topic No. 6 Developmental, individual, age- and sex-related characteristics of the facial skull. Features of the jaw structure as components of the maxillary system. Joints of the skull. Features of the temporomandibular joint structure

Duration of the lecture (in academic hours):	2

Purpose of the lecture:

1. tell students about aspects of development of bones of the skull, joints of the skull bones;
2. define relevant terminology: paranasal sinuses;
3. examine individual, age- and sex-related features of the shape of the facial skull; buttresses of the skull.

Lecture plan, order of presentation of its sections:

1. Features of the development and growth of the facial skull
2. Individual features of the shape of the facial skull
3. Facial skull buttresses
4. Paranasal sinuses
5. Features of the structure of the upper and lower jaws
6. Age-related features of the facial skull bones
7. Connections of the skull bones. Features of the structure of the temporomandibular joint

Recommended reading:

1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
Textbook
2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/

Topic No. 7 Functional morphology of the active part of the musculoskeletal system. The muscular system. Skeletal muscles

Duration of the lecture (in academic hours):	2

Purpose of the lecture:

1. tell students about the types and features of the structure of muscle tissue;
2. define relevant terminology: myon, cardiomyocyte, muscle fiber;
3. examine individual functional groups of muscles and muscle topography.

Lecture plan, order of presentation of its sections:

1. Features of the structure of smooth muscle tissue
2. Features of the structure of striated muscle tissue
3. Features of the structure of cardiac muscle
4. Classifications of muscles
5. Auxiliary apparatus of muscles

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
Textbook
2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/

Topic No. 8 Topography of the neck, fascia, and fascial spaces of the neck

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about topography of the neck muscles;
2. examine fascia, fascial and intermuscular spaces of the neck.

Lecture plan, order of presentation of its sections:

1. Neck triangles
2. Neck fascia
3. Fascial and intermuscular spaces of the neck and their functional significance

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
Textbook
2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/

Topic No. 9 Introduction to splanchnology

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the structure of the layers of the walls of hollow organs and the stroma and parenchyma of parenchymal organs;
2. define relevant terminology: holotopy, syntopy, and skeletotopy of an organ;
3. examine the functional classification of organs.

Lecture plan, order of presentation of its sections:

1. Conceptual framework: organ, organ system
2. Formation of organs
3. Location of organs in relation to the peritoneum
4. Structure of the mucous membrane, submucosa, and muscular layer
5. Concept of organ topography
6. Age-related features of organs

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A.

Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
Textbook
2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/

Topic No. 10 Functional anatomy of the respiratory system

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the classification of the respiratory system organs;
2. define relevant terminology: bronchial and alveolar tree;
3. examine the organs of the upper, anterior, middle and posterior mediastinum.

Lecture plan, order of presentation of its sections:

1. List of the respiratory system organs
2 Morphofunctional classification of the respiratory system
3. Classification and characteristics of the elements of the bronchial and alveolar tree
4. The main and additional functions of the respiratory tract and respiratory parenchyma.
5. Features of the structure of the respiratory tract
6. Structure of the respiratory parenchyma

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
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Topic No. 11 Functional anatomy of the oral cavity. Developmental, individual, and age-related characteristics

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about development, individual and age-related features of the oral cavity;
2. define relevant terminology: dentition and dentition segments;
3. examine the features of the structure of the walls and organs of the oral cavity.

Lecture plan, order of presentation of its sections:

1. The sections and walls of the oral cavity
2. The features of the structure of the organs of the oral cavity: the tongue, teeth, and salivary glands
3. The features of the structure and function of the dentition and dentition segments
4. Development, individual and age-related characteristics of the oral cavity

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
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Topic No. 12 Functional anatomy of the digestive system	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about classification of the digestive system organs; 2. define relevant terminology: functional and structural unit of the liver; 3. examine the features of the structure of individual organs.	
Lecture plan, order of presentation of its sections: 1. Organs of the digestive tract 2. Classifications: by origin, by topography, by functions, by structure 3. Features of the structure and function of the digestive system organs	
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ Textbook 2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/	
Topic No. 13 Anatomy and topography of the peritoneum	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the structure and function of the serous membranes; 2. define relevant terminology: peritoneum, abdominal cavity, and retroperitoneal space; 3. examine the walls of the hepatic, gastric, and omental sacs, the colonic canals, the mesenteric sinuses, and the recesses.	
Lecture plan, order of presentation of its sections: 1. The concepts of the abdominal cavity, the peritoneal cavity, and the retroperitoneal space 2. The omentums: structure and clinical significance 3. Sacs: structure, clinical significance 4. Recesses: structure, clinical significance 5. Sinuses of the abdominal cavity: formation, clinical significance	
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ Textbook 2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/	
Topic No. 14 Functional anatomy of the urinary system	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about classification of the urinary system organs; 2. define relevant terminology: nephron; 3. examine the features of the topography of the left and right kidneys.	

Lecture plan, order of presentation of its sections:

1. Functions of the kidneys
2. Topography of the kidneys
3. External structure of the kidney: surfaces, edges, poles, hila
4. The kidney's envelopes
5. The kidney's fixing apparatus
6. Internal structure of the kidney

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
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Topic No. 15 Functional anatomy of the male and female reproductive system

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the classification of the reproductive organs;
2.provide morphofunctional characteristics of each organ;
3. examine the features of blood supply and innervation of organs.

Lecture plan, order of presentation of its sections:

1. Surfaces, poles and edges of the testicle, features of its internal structure
2. Blood supply, lymph drainage, innervation of the testicle and its appendage
3. Parts of the vas deferens
4. Features of the prostate gland structure

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
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Topic No. 16 Functional anatomy of the endocrine system

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the classification of endocrine organs;
2. define relevant terminology: endocrine glands;
3. examine the structure and functions of each gland.

Lecture plan, order of presentation of its sections:

1. Classification of the endocrine glands
2. Structure of the endocrine glands
3. Thyroid gland: structure, topography. Blood supply, innervation
4. Parathyroid glands: structure, topography. Blood supply and innervation
5. Structure and functions of the adenohypophysis and neurohypophysis
6. Structure and functions of the pineal gland
7. Adrenal glands: structure, topography, and functions

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
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Topic No. 17 Introduction to neurology. Functional morphology of the spinal cord

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the structural elements of the nervous tissue and their main functions;
2. define relevant terminology: functional and structural unit of the nervous system and the cortex;
3. examine the structure of simple and complex reflex arcs and the external and internal structure of the spinal cord.

Lecture plan, order of presentation of its sections:
1. Functions of the nervous system
2. Classifications of the nervous system
3. Structural elements of the nervous tissue
4. Functional and structural units of the nervous system
5. Morphological foundations of the nervous system
6. Structure of the spinal cord

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
Textbook
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Topic No. 18 Functional morphology of the brain and sensory organs

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the structure of each part of the brain;
2. define relevant terminology: gray and white matter of the brain;
3. examine the peripheral, intermediate, and central parts of the sensory systems.

Lecture plan, order of presentation of its sections:
1. Classification of the brainstem parts
2. Functional anatomy of the medulla oblongata
3. Functional anatomy of the posterior brain
4. Functional anatomy of the midbrain
5. Functional anatomy of the diencephalon and telencephalon
6. Functional anatomy of the visual and auditory organs

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/

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Topic No. 19 Functional morphology of the peripheral nervous system. Cranial nerves	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the nuclei and skull exit points of the 1-12 pairs of cranial nerves; 2. examine the areas of innervation of sensory, motor, and autonomic fibers; 3. identify the symptoms of nerve damage.	
Lecture plan, order of presentation of its sections: 1. Structural elements of the peripheral nervous system 2. Patterns of nerve distribution 3. Features of the cranial nerves structure	
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ Textbook 2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/	
Topic No. 20 Functional morphology of the peripheral nervous system. Spinal nerves	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the principle of the formation of the spinal nerve and its branches; 2. give a description of the somatic plexuses; 3. the symptoms of damage to the branches of the somatic plexuses.	
Lecture plan, order of presentation of its sections: 1. Formation of the spinal nerve and its branches 2. Formation of the somatic plexuses 3. Characteristics of individual plexuses	
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ Textbook 2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/	
Topic No. 21 Functional morphology of the autonomic nervous system	
Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the areas of autonomic nervous system innervation;
2. characterize the sympathetic and parasympathetic parts of the ANS;
3. examine the localization of autonomic ganglia.

Lecture plan, order of presentation of its sections:

1. Distinctive features of the structural organization of the ANS
2. The sympathetic part of the ANS
3. Interaction of the autonomic and somatic parts of the nervous system

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
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Topic No. 22 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 external and internal structure and topography of the heart;
2. define relevant terminology: the conduction system of the heart;
3. examine the valve apparatus of the heart.

Lecture plan, order of presentation of its sections:

1. The concept of the cardiovascular system
2. Stages of the cardiovascular system development
3. Phylogenesis of the heart
4. Ontogenesis of the heart
5. Anatomy of the heart

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
Textbook
2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/

Topic No. 23 Functional anatomy of the circulatory system Functional anatomy of the lymphatic and immune systems. Functional morphology of the microcirculatory bed

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the classification of blood vessels;
2. examine the features of the structure and distribution of arteries and veins;
3. characterize the porto-caval anastomoses.

Lecture plan, order of presentation of its sections: 1. Classification of vessels 2. Structure of the wall of arteries and veins 3. Vessels of the great circle of blood circulation
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ Textbook 2. Human Anatomy. Textbook in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok, Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/

3. SUBJECT GUIDES FOR PRACTICAL CLASSES

Table 2. Subject Guides for Practical **Б1.О.09 Human anatomy. Head and neck anatomy** Classes

Topic No.1 Functional anatomy of the trunk skeleton	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge gained from the lecture; 2. during the discussion, outline the main patterns of bone structure and bone connections; 3. thoroughly go over definitions and concepts of synostoses, synchondrosis, and syndesmosis and identify them in the body joints; 4. study the structure of the spinal column and the chest; 5. determine the symptoms of damage to the intervertebral joints.	
Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.	
Independent work of the student: working with study materials, watching educational videos, working with the EER.	
Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.	
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ 2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/ 3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.	
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. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main patterns of bone and joint structure of the upper limb;
3. thoroughly go over definitions and concepts of the main and additional elements of the joints of the upper limb;
4. study the features of the structure of the joints of the upper limb;
5. determine the symptoms of upper limb fractures.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/
3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.

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. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main patterns of bone structure and lower limb joints;
3. thoroughly go over definitions and concepts of the main and additional elements of lower limb joints;
4. study the features of the structure of pelvic and lower limb joints;
5. identify the symptoms of lower limb fractures.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba,

L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/
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Topic No.4 Knowledge assessment (bones of the trunk and limbs and their joints) using anatomical preparations
Functional anatomy of the bones of the neurocranium

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. assess the students' knowledge of the preparations of the bones of the trunk and extremities and their connections;
3.during the discussion, outline the main patterns of the brain skull bones;
4. study the features of the individual brain skull bones;
5. identify the openings and canals of the sphenoid and temporal bones.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/
3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.

Topic No.5 Functional anatomy of the facial bones

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main patterns of the structure of the facial bones;
3. study the features of the structure of individual facial bones.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ 2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/ 3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.
Topic No.6 Functional anatomy of the skull as a whole. Joints of the bones of the skull

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

Purpose of the practical class: 1. consolidate acquired knowledge gained from the lecture; 2. during the discussion, outline the main elements of the skull structure in general; 3. thoroughly go over definitions and concepts of the vault and base of the skull, the anterior, middle, and posterior cranial fossae; 4. study the features of the structure of the orbit, nasal cavity, and paranasal sinuses; 5. determine the connections of the sphenopalatine fossa, the external and internal base of the skull; 6. study the connections of the skull bones and the features of the structure of the temporomandibular joint.
Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.
Independent work of the student: working with study materials, watching educational videos, working with the EER.
Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ 2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/ 3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.
Topic No.7 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. consolidate acquired knowledge gained from the lecture; consolidate the knowledge of the structure of the skull bones and their connections;
2. during the discussion, outline the main patterns of the muscular system of the head and neck;
3. thoroughly go over definitions and concepts of triangles, fasciae, and fascial spaces of the neck.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/
3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky,
G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p.
URL: http://www.studmedlib.ru2.

Topic No.8 Muscles and topography of the back, chest and abdomen

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main patterns of the structure of the muscles of the back, chest, and abdomen;
3. thoroughly go over definitions and concepts of the weak points of the anterolateral abdominal wall;
4. study the structure of the inguinal canal, the white line of the abdomen, and the sheath of the rectus muscles of the abdomen.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019.

105 p. https://www.twirpx.club/file/3078511/
3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.

Topic No.9 Muscles and topography of the upper limb

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

Purpose of the practical class:
1. consolidate acquired knowledge of gained from the lecture;
2. during the discussion, outline the main patterns of structure and topography of the muscles of the upper limb;
3. thoroughly go over definitions and concepts of the sub-axillary fossa, the shoulder-muscular canal, the ulnar fossa, and the synovial sheaths of the hand;
4. study the features of structure and function of the flexors of the phalanges of the fingers;
5. identify the symptoms of fractures of the humerus, radius, and ulna.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/
3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.

Topic No.10 Muscles and topography of the lower limb

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main patterns of the structure and topography of the muscles of the lower limb;
3. thoroughly go over definitions and concepts of vascular and muscular lacunae and the femoral canal;
4. study the features of the structure and function of the flexors of the phalanges of the fingers;
5. identify the symptoms of damage in fractures of the femur and tibia.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/
3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.

Topic No.11 Knowledge assessment (myology) using anatomical preparations
Functional anatomy of the respiratory system: nasal cavity, pharynx, larynx (structural features of the walls, sections, communications/connections)

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lectures, knowledge gained on the Myology section;
2. during the discussion, outline the basic patterns of structure of hollow and parenchymal organs;
3. thoroughly go over definitions and concepts of the organ, organ system, organ apparatus;
4. study the features of the respiratory system: nasal cavity, pharynx, larynx (structural features of the walls, sections, communications/connections).

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/
3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.

Topic No.12 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 gained from the lectures;
2. during the discussion, outline the main patterns of bronchial branching;
3. thoroughly go over definitions and concepts of the bronchial and alveolar tree;
4. study the features of the structure of the trachea, lungs, pleura, and mediastinum;
5. identify the symptoms of damage to the pleura.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/
3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.

Topic No.13 Knowledge assessment using anatomical preparations (respiratory system)

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lectures;
2. assess the students' knowledge of the Respiratory System section using models and anatomical preparations.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
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G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p.
URL: http://www.studmedlib.ru2.

Topic No.14 Functional anatomy of the oral cavity and the maxillary system

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main patterns of development, individual and age-related features of the oral cavity structure;
3. thoroughly go over definitions and concepts of the dentition and dentition segments;
4. study the features of the structure of the walls and organs of the oral cavity (tongue, teeth, and salivary glands).

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
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G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p.
URL: http://www.studmedlib.ru2.

Topic No.15 Functional anatomy of the hollow organs of the digestive system

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main patterns of the structure of the walls of hollow organs;
3. thoroughly go over definitions and concepts of holotopy, syntopy, and skeletotopy;
4. study the features of the structure of the esophagus, stomach, and intestines;
5. determine the functions of the hollow organs of the digestive system.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/
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G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p.
URL: http://www.studmedlib.ru2.

Topic No.16 Functional anatomy of parenchymal organs of the digestive system. Anatomy and topography of the peritoneum

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main patterns of the parenchymal organs;
3. thoroughly go over definitions and concepts of the peritoneum, abdominal cavity, abdominal cavity, retroperitoneal space;
4. study patterns of the features of the structure and topography of the salivary glands, liver, pancreas;
5. develop determine the functions of the parenchymal organs of the digestive system.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/
3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky,
G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p.
URL: http://www.studmedlib.ru2.

Topic No.17 Knowledge assessment (digestive system) using anatomical preparations Functional anatomy of the urinary system

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. assess the students' knowledge of the Digestive System section using models and anatomical preparations
3. during the discussion, outline the main patterns of primary and secondary urine formation;

4. study the structure of the functional and structural unit of the kidney, the nephron;
5. study the structure and topography of the kidney, ureters, and bladder.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
https://www.books-up.ru/
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G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p.
URL: http://www.studmedlib.ru2.

Topic No.18 Functional anatomy of the male and female reproductive system

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main functions of the male and female reproductive system;
3. thoroughly go over definitions and concepts of ovulation and spermatogenesis;
4. study the structure of the male reproductive system: testes, prostate gland, seminal vesicles, and spermatic cord;
5. study the structure of the female reproductive system: ovaries, uterus, fallopian tubes, and vagina.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
https://www.books-up.ru/
2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/

3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.

Topic No.19 Knowledge assessment (genitourinary and endocrine systems) using anatomical preparations

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. assess the students' knowledge of the Urinary, Reproductive, and Endocrine System using models and anatomical preparations.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/
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Topic No.20 Introduction to neurology. Functional anatomy of the spinal cord

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main types of neurons based on the number of processes and their functions;
3. thoroughly go over definitions and concepts of the structure of gray and white matter;
4. study the features of the internal and external structure of the spinal cord;
5. determine the morphological basis of the reflex activity of the nervous system.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
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URL: http://www.studmedlib.ru2.

Topic No.21 Functional anatomy of the brain

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main patterns of the structure of the gray and white matter throughout the medulla oblongata, posterior, middle, and intermediate brain;
3. thoroughly go over the topography of the nuclei and the location of the brainstem pathways using models and tablets;
4. study the structure of the walls of the brain ventricles and their connections;
5. identify the symptoms of damage connected to different localization of pathological foci in the brain.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
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URL: http://www.studmedlib.ru2.

Topic No.22 Functional anatomy of the sensory organs

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lecture;
2. during the discussion, outline the main patterns of the sensory system structure;
3. thoroughly go over definitions and concepts of primary and secondary analyzers;
4. study the features of the structure of the visual, auditory, vestibular, gustatory, olfactory, and somatosensory systems;

5. identify the symptoms of damage to the peripheral, intermediate, and central parts of each sensory system.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
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Topic No.23 Knowledge assessment (neurology and estesiology) using anatomical preparations

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lectures;
2. assess the students' knowledge on the Neurology and Estesiology sections;
3. during the discussion, outline the main patterns of cranial nerve formation;
3. study the structure of 1 - 12 pairs of cranial nerves;
4. determine the symptoms of cranial nerve injury/lesions.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
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Topic No.24 Spinal nerves. Somatic plexuses. The autonomic nervous system

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lectures;
2. during the discussion, outline the basic patterns of the structure and topography of the autonomic nuclei and ganglia;
3. thoroughly go over definitions and concepts of the sensory and motor root, spinal nerve, anterior and posterior branches of the spinal nerve, somatic plexus, and plexus nerves; sympathetic and parasympathetic systems;
4. study the features of the structure and topography of the cervical, brachial, lumbar, and sacral plexuses; features of the structure and areas of innervation of the autonomic system;
5. determine the symptoms of damage in the case of injuries of various somatic nerves.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
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Topic No.25 Knowledge assessment (neurology) using anatomical preparations

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

Purpose of the practical class:
1. consolidate acquired knowledge gained from the lectures;
2. assess the students' knowledge on the Neurology section

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
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Topic No.26 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 gained from the lectures;
2. during the discussion, outline the main patterns of the external and internal structure of the heart;
3. thoroughly go over definitions and concepts of the cardiac conduction system and the valve apparatus;
4. study the features of the topography of the heart and the location of the valves;
5. the symptoms of heart valve damage.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
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Topic No.27 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 gained from the lectures;
2. during the discussion, outline the main patterns of structure of the main and organ arteries, arterioles, and capillaries;
3. thoroughly go over definitions and concepts of parietal and visceral arteries;
4. study the parts of the aorta and their branches;
5. identify the main intersystem arterial anastomoses.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL:
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Topic No.28 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 gained from the lectures;
2. during the discussion, outline the structure of veins, lymphatic vessels and microcirculation vessels;
3. thoroughly go over definitions and concepts of veins, venules, lymphatic capillaries, lymphatic vessels, trunks and ducts;
4. study the structure and functional role of portacaval anastomoses;
5. study the structure of the central and peripheral organs of the immune system.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.

Independent work of the student: working with study materials, watching educational videos, working with the EER.

Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.

Recommended reading:
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Topic No.29 Knowledge assessment (cardiovascular and immune systems) using anatomical preparations	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge gained from the lectures; 2. assess the students' knowledge of the Angiology and immunology section using models and anatomical preparations.	
Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, models, bone specimens, and museum anatomical specimens, as well as subject guides for the discipline.	
Independent work of the student: working with study materials, watching educational videos, working with the EER.	
Methods of evaluation of acquired knowledge and skills: classroom questioning using models and anatomical specimens.	
Recommended reading: 1. Atlas of Human Anatomy. 7th revised edition by R. D. Sinelnikov, Ya. R. Sinelnikov, and A. Ya. Sinelnikov. Moscow: Novaya Volna, 2019. URL: https://www.books-up.ru/ 2. Human Anatomy. Study Guide in 2 parts. [Electronic resource] L.N. Katsuk, A.E. Kotsyuba, L.N. Momot, O.A. Ustimenko, ed. V.M. Chertok Vladivostok: Medicine of the Far East, 2019. 105 p. https://www.twirpx.club/file/3078511/ 3. Human Anatomy: Textbook: in 2 volumes [Electronic resource] I. V. Gayvoronsky, G. I. Nichiporuk, A. I. Gayvoronsky - Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.	

4. GUIDELINES FOR CONTINUOUS AND INTERIM ASSESSMENT

Table 3. Guidelines for Conducting Continuous and Interim Assessment during the **Б1.О.09 Human anatomy. Head and neck 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; - assessment and evaluation of 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 31.05.03 Dentistry for international students (in English) specialty; list of the aforementioned personnel is available on the website of the educational organization.

