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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
First Vice-Rector
_____ / Trankovskaya L.V./
"9" июля 2025

DISCIPLINE WORK PROGRAM

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

Program of the discipline **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 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.

Work program for the discipline was 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

1.1. Purpose and Objectives of Mastering Б1.О.09 Anatomy

The purpose of mastering the discipline is acquiring knowledge of the structure, topography, blood supply, and innervation of the organs of the head and neck, internal organs, structure and functions of the musculoskeletal system, sensory organs, as well as the principles of obtaining morphological knowledge necessary for further training in other fundamental medical disciplines, as well as for clinical and preventive disciplines.

Objectives of mastering the discipline:

1. Obtaining systemic theoretical, scientific, and applied knowledge on the principles of organization of the human body and their manifestations in the structure of the anatomical and physiological systems; on the morphofunctional organization of the human body, its systems, and organs; sources and course of development of organs and systems; the topography of organs; the subtle anatomical and topographic relationships in certain areas of the body that are particularly important from a clinical perspective; the main variants, abnormalities, and malformations of organs and systems; as well as the clinical significance of the anatomical phenomena being studied.
2. Developing skills of using the medical and anatomical conceptual framework, including English and Latin anatomical terminology;
3. Developing skills of reproducing movements in the joints of the trunk and extremities; evaluating the work of all muscle groups in the head, neck, trunk, and extremities;
4. Developing skills of finding and palpating the main bony landmarks and muscle masses on the human body.

2. DISCIPLINE AS PART OF THE BASIC EDUCATIONAL PROGRAM

Discipline **Б1.О.06 Biology** is included in the Mandatory part of the Unit 1 of the basic educational program 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), and is part of the 1st, 2nd, and 3rd semesters' curriculum.

3. PLANNED LEARNING OUTCOMES OF THE DISCIPLINE

3.1. Mastering the discipline **Б1.О.09 Anatomy** is aimed at the development of students' competencies. The discipline facilitates the development of students' competencies corresponding to the types of professional activity.

Name of competency category (group)	Code and Name of competency of the graduate	Competency Indicators
Universal Competencies		
Systemic and critical thinking	UC-1. Is able to analyze of problems critically using system approach and devise a plan of action	CI.UC-1_1- looks for and investigates problem situations that arise during professional activity CI.UC-1_2- selects sources of information for critical analysis of problem situations that arise during professional activity CI.UC-1_3- develops and substantively argues a plan of action for solving problem situations using systemic and interdisciplinary approaches
General Professional Competencies		

Etiology and pathogenesis	GPC-5. Is able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity	CI.GPC-5_1- assesses the morphofunctional state based on the acquired knowledge CI.GPC-5_2- distinguishes between pathological and physiological processes, identifies etiology of changes CI.GPC-5_3- provides diagnostic assessment of the identified changes

3.2. Types of professional activity corresponding to competencies developed over the course of mastering **Б1.О.09 Anatomy**:

Types of professional activity objectives

1. *Medical*

Kinds of professional activity objectives

1. *Diagnostics*
2. *Treatment*

3.3. Planned learning outcomes of mastering the discipline are represented by knowledge, skills, abilities and/or experience, characterize the stages of developing competencies and ensure achievement of the planned outcomes of mastering the basic educational program. Learning outcomes of a discipline are correlated with competency indicators.

4. SCOPE AND CONTENT OF THE DISCIPLINE

4.1. Scope of the Discipline and Types of Academic Work

Type of Academic Work		**Total Hours**	**Semesters**		
			1	**2**	**3**
			hours	**hours**	**hours**
1		2	3	4	
Classroom hours (total), including:		**204**	**52**	**92**	**60**
Lectures (L)		56	20	20	16
Practical classes (C)		148	32	72	44
Independent work of the student (IW), including:		**120**	**20**	**52**	**48**
Electronic educational resource (EER)		25	5	10	10
Preparing for classes (CP)		72	10	32	30
Preparing for continuous assessment (CAP)		23	5	10	8
Interim assessment		**36**			**36**
Type of interim assessment	pass/fail test (T)				
	exam (E)	E			E
TOTAL: TOTAL credit value	hrs.	**360**	**72**	**144**	**144**
	credits	**10**	**2**	**4**	**4**

4.2. Contents of the Discipline

4.2.1. Topics of Discipline Lectures and Academic Hours per Semester

No.	**Lecture Topic**	**Hours**

1	2	3
	Semester No. 1	
1.	Introduction to human anatomy. Contents and objectives of anatomy	2
2.	Functional anatomy of the passive part of the musculoskeletal system. Skeleton	2
3.	Functional anatomy of the passive part of the musculoskeletal system. Anatomy of the skull	2
4.	The study of bone connections – syndesmology	2
5.	The study of bone connections. Joints	2
6.	Functional morphology of the active part of the musculoskeletal system. The study of muscles – myology	2
7.	Skeletal muscles. Fundamentals of muscle biomechanics	2
8.	Functional morphology of the active part of the musculoskeletal system. Muscles of the trunk	2
9.	Functional morphology of the active part of the musculoskeletal system. Muscles of the upper and lower extremities	2
10.	Functional morphology of the musculoskeletal system. Age-related changes in bones, joints, and muscles	2
Hours per semester total		**20**
	Semester No. 2	
1.	Functional anatomy of the nervous system. The study of the nervous system – neurology. The spinal cord	2
2.	Functional anatomy of the brain: the brainstem and the cerebrum	2
3.	Functional anatomy of the somatic and autonomic nervous system	2
4.	Functional anatomy of the sensory systems – esthesiology. Primary sensory analyzers	2
5.	Functional anatomy of the sensory systems – esthesiology. Secondary sensory analyzers	2
6.	Introduction to angiology. Functional anatomy of the heart	2
7.	Functional anatomy of the vascular and immune systems	2
8.	Functional anatomy of the arterial system	2
9.	Functional anatomy of the venous system	2
10.	Functional anatomy of the lymphatic system	2
Hours per semester total		**20**
	Semester No. 3	
1.	Introduction to splanchnology	2
2.	Functional anatomy of the respiratory system	2
3.	Functional anatomy of the digestive system (gastrointestinal tract)	2
4.	Functional anatomy of the glands of the digestive system (gastrointestinal tract)	2
5.	Anatomy and topography of the peritoneum	2
6.	Functional anatomy of the urinary and endocrine systems	2
7.	Functional anatomy of the male reproductive system	2
8.	Functional anatomy of the female reproductive system	2
Hours per semester total		**16**

4.2.2. Topics of Discipline Practical Classes and Academic Hours per Semester

No.	**Practical Class Topic**	**Hours**
1	2	3
	Semester No. 1	
1	Introduction to osteology and arthrosynodesmology. Functional anatomy of the trunk skeleton and bone connections	4
2	Functional anatomy of the bones and joints of the shoulder girdle and upper limb	4

3	Functional anatomy of the bones and joints of the pelvis and lower limb	4
4	Knowledge assessment (bones of the trunk and limbs and their joints) using anatomical preparations	4
5	Functional anatomy of the bones of the neurocranium	4
6	Functional anatomy of the facial bones	4
7	Functional anatomy of the skull as a whole	4
8	Functional anatomy of the joints of the bones of the skull and the connection of the skull and the spine	4
9	Knowledge assessment (bones of the skull and their joints) using anatomical preparations	4
Hours per semester total		**32**
	Semester No. 2	
1	Functional anatomy of the muscles of the head and neck. Topography of the neck, fascia, and fascial spaces of the neck	4
2	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	4
3	Functional anatomy of the muscles, fascia, and topography of the shoulder girdle and upper limb	4
4	Functional anatomy of the muscles, fascia, and topography of the pelvis and lower limb	4
5	Knowledge assessment using anatomical preparations and test on myology	4
6	Functional anatomy of the midbrain (mesencephalon) and interbrain (diencephalon)	4
7	Functional anatomy of the endbrain (telencephalon)	4
8	The meninges and spaces between the meninges of the brain and spinal cord. Cerebrospinal fluid circulation. Blood vessels of the brain	4
9	Functional anatomy of the sensory organs. Functional anatomy of the neural pathways	4
10	Knowledge assessment (CNS) using anatomical preparations	4
11	Functional anatomy of the cranial nerves	4
12	Functional anatomy of the spinal nerves	4
13	Functional anatomy of the autonomic nervous system. Sympathetic and parasympathetic nervous systems. Autonomic nerve plexuses	4
14	Knowledge assessment using anatomical preparations and test on neurology	4
15	Functional anatomy of the heart. Pulmonary circulation	4
16	Functional anatomy of the systemic circulation: arteries	4
17	Functional anatomy of the venous and lymphatic systems	4
Hours per semester total		**72**
	Semester No. 3	
1	Functional anatomy of the respiratory system (nasal cavity, pharynx, larynx)	4
2	Functional anatomy of the respiratory system (trachea, bronchi, lungs, pleura). Mediastinum	4
3	Knowledge assessment using anatomical preparations (respiratory system)	4
4	Functional anatomy of the digestive system (oral cavity, esophagus, stomach, intestines)	4
5	Functional anatomy of the glands of the digestive system (liver, gallbladder, biliary tract, pancreas)	4
6	Peritoneum. Peritoneal cavity	4
7	Knowledge assessment using anatomical preparations (digestive system) Functional anatomy of the urinary system. Male urethra	4
8	Functional anatomy of the male reproductive organs	4

9	Functional anatomy of the female reproductive organs. Perineum	4
10	Functional anatomy of the endocrine glands	4
11	Knowledge assessment using anatomical preparations (genitourinary and endocrine systems)	4
Hours per semester total		**44**

4.2.3. Independent Work of the Student

No.	Name of the Discipline Section	Type of IW	Total Hours
1	3	4	5
	Semester No. 1		
1	Osteology and arthrosyndesmology	Preparing for practical classes using recommended and supplementary reading; preparing for continuous assessment; student research activity	10
2	Craniology	Preparing for practical classes using recommended and supplementary reading; preparing for continuous assessment; student research activity	10
	Hours per semester total		**20**
	Semester No. 2		
1	Myology	Preparing for practical classes using recommended and supplementary reading; preparing for tests	12
2	Angiology and immunology	Preparing for practical classes using recommended and supplementary reading; preparing for tests	12
3	Central nervous system and anesthesiology	Preparing for practical classes using recommended and supplementary reading; preparing for tests; preparing for the students Olympiad	16
4	Peripheral nervous system	Preparing for practical classes using recommended and supplementary reading; preparing for tests; preparing for the students Olympiad	12
	Hours per semester total		**52**
	Semester No 3		
1	Respiratory system	Preparing for practical classes using recommended and supplementary reading; preparing for tests; preparing for the students Olympiad	14
2	Digestive system	Preparing for practical classes using recommended and supplementary reading; preparing for tests; preparing for the students Olympiad	16
3	Urinary and endocrine systems	Preparing for practical classes using recommended and supplementary reading; preparing for tests; preparing for the students Olympiad	18
	Hours per semester total		**48**

5. REQUIREMENTS FOR IMPLEMENTATION OF DISCIPLINE

5.1. Discipline Requirements for Educational Materials and Provided Information

Essential reading

No.	Name/Title, Resource Type	Author(s)/Editor	Publisher Imprint, Web Address	Number of Copies (accesses) in the Library and Information Center
1	2	3	4	5
1	Atlas of human anatomy. 7th revision ed. [Electronic resource]..	R. D. Sinelnikov, Y. R. Sinelnikov, A. Y. Sinelnikov	Moscow: New Wave, 2019. URLhttps://www.books-up.ru/ /	Unlimited access
2	Human anatomy: textbook : in 2 volumes [Electronic resource]	I. V. Gaivoronsky, G. I. Nichiporuk, A. I. Gaivoronsky	Moscow: GEOTAR-Media, 2018. - 480 p. URL: http://www.studmedlib.ru2.	Unlimited access

Supplementary reading

No.	Name/Title, Resource Type	Author(s)/Editor	Publisher Imprint, Web Address	Number of Copies (accesses) in the Library and Information Center
1	2	3	4	5
1	Human anatomy: textbook: in 3 volumes: , [Electronic resource].	edited by L. L. Kolesnikov.	Moscow : GEOTAR-Media, 2015, URL: http://www.studmedlib.ru	Unlimited access
2	Morphofunctional organization of human head and neck organs : textbook. manual for students of medical universities	Chertok V.M., Edranov S.S., Kargalova E.P.	Vladivostok : Medicine DV, 2016. 168 p. http://www.studmedlib.ru	Unlimited access
3	Anatomy of the head and neck. Introduction to clinical anatomy : textbook.	Bazhenov D.V.	Moscow : GEOTAR-Media, 2014. 464 p. URL: http://www.studmedlib.ru	Unlimited access

Online resources

1. Electronic library system "Student Consultant" http://studmedlib.ru/
2. Electronic library system "University Library Online"http://www.biblioclub.ru/
3. Electronic library system "Urait" https://urait.ru/
4. Electronic library system "BookUp" https://www.books-up.ru/
5. Resources owned by the Library and Information Center of FSBEI HE PSMU of the Ministry of Health of Russia https://tgmu.ru/university/bibliotechno-informacionnyj-centr/resursy-bic/sobstvennye/

Online resources and respective user guides are available on the Library and Information Center website Library and Information Center — PSMU (tgmu.ru)

5.2. Discipline Requirements for Facilities and Resources

Information on the facility and resource availability and requirements of the discipline is available on the Facility and resource availability and requirements. FSBEI HE PSMU of the Ministry of Health of Russia (tgmu.ru)" page of the official website of the university.

5.3. List of Information Technologies, Information and Reference Systems, Licensed and Free Software (Including Domestically-developed Software):

1. PolycomTelepresence M100 Desktop Conferencing Application (Videoconference system)
2. SunRav Software tTester
3. 7-PDF Split & Merge
4. ABBYYFineReader
5. Kaspersky Endpoint Security
6. INDIGO online testing system
7. Microsoft Windows 7
8. Microsoft Office Pro Plus 2013
9. 1C:University
10. GARANT system
11. MOODLE (Modular Object-Oriented Dynamic Learning Environment)

6. ASPECTS OF THE IMPLEMENTATION OF THE DISCIPLINE FOR STUDENTS WITH DISABILITIES AND SPECIAL NEEDS

6.1. 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.

6.2. Ensuring 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.

6.3. Availability of the Internal Policies and Procedures of FSBEI HE PSMU of the Ministry of Health of Russia to Students with Disabilities in a Format 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 format accessible to them.

6.4. Increase in the Time Limit of Interim Assessment for 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 conducted for students with disabilities and special needs is selected taking into account individual characteristics of the students (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.

7. 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.

8. TUTORIAL WORK

Type of tutorial work	Forms and approaches to tutorial work	Assessment criteria
Assistance in personal growth	Overt Talks and problem-centric debates aimed at promotion of healthy lifestyle. Participation in interdepartmental conferences aimed at formation of healthy lifestyle and development of skills necessary to preserve and improve health.	Portfolio
	Covert – creating atmosphere and infrastructure. Developing a culture of healthy lifestyle, the ability to preserve and improve health. Creating atmosphere of kindness and respect with a high level of communication during implementation of the discipline.	
Civic position and values	Overt Conducting events that facilitate development of civil culture (roundtable discussions, discussions/debates, and talks). Short discussions on current significant events in case the latter occur.	Portfolio
	Covert Focusing on civic values-oriented position and legal awareness. Cultivating mindful social position during professional activity.	
Social values	Overt Highlighting aspects of organization of healthy lifestyle based on health-preserving technologies. Highlighting ecology-related questions, environmental issues as a factor affecting population health and select population risks.	Portfolio
	Covert Identification in social structure during period of education and in professional activity.	