#### FEDERAL STATE BUDGET EDUCATIONAL INSTITUTION OF HIGHER EDUCATION "ROSTOV STATE MEDICAL UNIVERSITY" MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

Faculty of Education of foreign students, residents and postgraduates

and and

States.

No.

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| Supervisor   |   |
| educational program<br>/ E.S. Belousova /                      |   |
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# DISCIPLINE WORKING PROGRAM

#### ANATOMY

Speciality 31.05.01 General medicine

Form of education <u>full-time</u>

Rostov-on-Don 2020

#### I. GOALS AND OBJECTIVES OF MASTERING THE DISCIPLINE

Goals of mastering the discipline: formation of students' knowledge of human anatomy; the structure of both the body as a whole and individual organs and systems based on modern achievements; formation of skills to use the acquired knowledge in the subsequent study of other fundamental and clinical disciplines, as well as in the future professional activity of a doctor.

- **Tasks:**students' study of the structure, functions and topography of the organs of the human body, anatomical and topographic relationships of organs, individual and age-related features of the structure of the human body, including the prenatal period of development (organogenesis), variants of the anatomical structure of individual organs and anomalies of their development;
- formation in students of knowledge about the interdependence and unity of structure and function of both individual organs and the body as a whole, about the relationship of the body with changing environmental conditions, the influence of environmental, genetic factors, the nature of work, profession, physical culture and social conditions on the development and structure of the human body;
- formation of an integrated approach among students when studying the anatomy and topography of organs and their systems; a synthetic understanding of the structure of the human body as a whole as the interconnection of individual parts of the body; ideas about the importance of fundamental anatomical research for medicine;
- developing in students the ability to navigate the complex structure of the human body, to accurately and accurately find and determine the location and projection of organs and their parts on the surface of the body.
- education of students, guided by the traditional principles of humanism and mercy, respectful and caring attitude towards

the object being studied - the organs of the human body, the corpse; instilling highly moral standards of behavior in the section halls of a medical university.

# II. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

The process of studying the discipline is aimed at developing the following competencies in accordance with the Federal State Educational Standard of Higher Education and the EP of Higher Education in this specialty:

## general professional(OPK):

-readiness to solve standard problems of professional activity using information, bibliographic resources, medical and biological terminology, information and communication technologies and taking into account the basic requirements of information security (GPC-1);

 ability and readiness to implement ethical and deontological principles in professional activities (GPC-4);

– the ability to assess morphofunctional, physiological states and pathological processes in the human body to solve professional problems (OPK-9).

#### III. THE PLACE OF DISCIPLINE IN THE STRUCTURE OF EP VO

3.1. The academic discipline "Anatomy" is basic to the cycle of mathematical and natural scientific disciplines.

3.2. A list of subsequent academic disciplines that require knowledge, skills and proficiency formed by this academic discipline: - normal physiology, pathological anatomy, topographic anatomy and operative surgery, propaedeutics of internal and surgical diseases.

## IV. CONTENT AND STRUCTURE OF DISCIPLINE The complexity of the discipline in Z<u>1</u> hour 468 4.1. Sections of the discipline studied in \_3\_\_\_\_\_semesters

|                    |  |       |       | Nu       | mber o                      | f hours | ;   |
|--------------------|--|-------|-------|----------|-----------------------------|---------|-----|
| Secti<br>on<br>no. | Section name   | Total |       | ler the  | dentwo<br>supervi<br>eacher |         | SRS |
|                    |  |       | L     | WI<br>TH | ETC                         | LR      |     |
|                    |  |       | Semes | ter 1    |                             |         |     |
| 1                  | Musculoskeleta<br>l system   | 108   | 16    |          | 48                          |         | 44  |
|                    | Total  | 108   | 16    |          | 48                          |         | 44  |
| (test/te           | n certification form<br>est with<br>ment/exam)                                 |       | 1     |          | Te                          | est     |     |
|                    |  |       | Semes | ter 2    |                             |         |     |
| 2                  | Splanchnology  | 108   | 8     |          | 42                          |         | 58  |
| 3                  | The<br>cardiovascular<br>system  | 108   | 8     |          | 54                          |         | 46  |
|                    | Total  | 216   | 16    |          | 96                          |         | 104 |
| certifi            | of intermediate<br>cation (test/test with<br>ment/exam                         |       |       |          | Te                          | est     |     |
|                    |  |       | Semes | ter 3    |                             |         |     |
| 4                  | Centralnervous<br>system   | 49    | 8     |          | 21                          |         | 20  |
| 5                  | Peripheralnervous system   | 43    | 6     |          | 21                          |         | 16  |
| 6                  | Sense organs   | 16    | 2     |          | 6                           |         | 8   |
| Total              |  | 108   | 16    |          | 48                          |         | 44  |
| (test/te           | Interim certification form<br>(test/test with assessment/exam) exam - 36 hours |       |       |          |                             | urs     |     |
|                    | TOTAL:   | 468   | 48    |          | 192                         |         | 192 |

**SRS**- independent work of students

L– lectures – seminars (in accordance with the RUP)

**LR** –laboratory work (in accordance with the RUP)

# 4.2. Contact work

| Sectio   | No.lec                             |  | Numbe         |
|--|------------------------------------|--|---------------|
| n<br>number  | tures<br>and                       | Lecture topics   | r of<br>hours |
|  | ·                                  | Semester 1   |               |
|  |                                    | Main stages of historical development  |               |
|  | 1                                  | anatomical science. Introduction to anatomy.   | 2             |
|  |                                    | Ethics and deontology in the study of anatomy.   |               |
|  | 2                                  | Functional anatomy of the trunk skeleton.  | 2             |
|  | 3 Functional anatomy of the skull. |  | 2             |
|  | 4                                  | Functional anatomy of the skeleton   | 2             |
|  | 5                                  | Types of bone joints. Radiation anatomy  | 2             |
|  |                                    | General information about the muscular system.   | 2             |
| Musculosk  |                                    | Functional anatomy of the trunk muscles.   |               |
| eletal   | 6                                  | Topographic anatomy of the back, chest and   |               |
|  |                                    | abdomen. Anterior abdominal wall   |               |
| apparatus  | 7                                  | Functional anatomy of the muscles of the head and<br>neck.<br>Fascia of the head. Triangles, fascia and<br>interfascial spaces of the neck. Review<br>movements in the temporomandibular joint<br>and joints of the cervical spine                           | 2             |
|  | 8                                  | Functional anatomy of the upper muscles<br>limbs. Topographic anatomy<br>upper limbs. Overview of movements in<br>joints.<br>Functional anatomy of the lower muscles<br>limbs. Topographic anatomy<br>lower extremities. Overview of movements in<br>joints. |               |
|  |                                    | Semester 2   |               |
| Splanchno-<br>logy General concepts about internal organs and their<br>distribution across systems and devices in<br>communication<br>with the function being performed. Ontogenesis,<br>anomalies<br>development, general morphology,<br>age<br>peculiarities And functional anatomy<br>digestive system. |                                    | 2  |               |
|  | 2                                  | Ontogenesis, anomalies development, general<br>morphology, age peculiarities<br>And  | 2             |

# Lectures

|                      |   | functional anatomy respiratory   |   |
|----------------------|---|--|---|
|                      |   | systems, diaphragms. The chest cavity and its walls. Pleural cavities.   |   |
|                      | 3 | Ontogenesis, anomalies development,<br>general morphology,<br>agepeculiarities And<br>functionalanatomy of   | 2 |
|                      | 4 | the urinary and reproductive systems.Ontogenesis, anomaliesdevelopment, generalmorphology,agepeculiaritiesAndfunctionalanatomy of  | 2 |
|                      | 5 | the endocrine glands.<br>Morphofunctional characteristic<br>serous cavities. Peritoneum, visceral and parietal<br>layers, bursae, omentum. Projection of organs onto<br>the anterior abdominal wall. | 2 |
|                      | 6 | Functional anatomy of the heart. Conductive<br>cardiac system, its blood supply and innervation.<br>Projection and listening locations of heart valves   | 2 |
| The<br>cardiovasc    | 7 | FunctionalanatomyarterialsystemsPlaces where arteries are pressed.   | 2 |
| ular system          | 8 | Functional anatomy of the venous system.<br>Anastomoses. Features of fetal blood circulation.<br>Functional anatomy of the lymphatic system.<br>Outflow of lymph from internal organs.               | 2 |
|                      |   | Semester 3   |   |
|                      | 1 | Functional anatomy, phylogeny and ontogenesis of<br>the central nervous system. External and internal<br>structure of the spinal cord.   | 2 |
| Central I<br>nervous | 2 | Functional anatomy trunk brain.  | 2 |
| system               | 3 | Functional anatomy of the telencephalon. The membranes of the brain. Circulation of cerebrospinal fluid.   | 2 |
|                      | 4 | Localization of functions in the cerebral cortex.<br>Conducting tracts of the spinal cord and brain.   | 2 |
| Sense<br>organs      | 5 | Functional anatomy organs<br>feelings.Conducting paths of<br>analyzers.  | 2 |
| Peripheral           | 6 | Topography of cranial nerve nuclei. Functional anatomy of I-XII pairs of cranial nerves.   | 2 |
| nervous<br>system    | 7 | Formation of spinal nerves, branches. Functional<br>anatomy of the cervical, brachial, lumbar, sacral,<br>and coccygeal plexuses. Innervation of muscles and<br>skin.                                | 2 |

|       |   | Functional anatomy of the autonomic nervous  | 2  |
|-------|---|--|----|
|       |   | system. Centers, branches, nodes, plexuses   |    |
|       | 8 | sympathetic                                  |    |
|       | 0 | Andparasympathetic                           |    |
|       |   | departments. Innervation of internal organs. |    |
|       |   | Zakharyin zones-Geda                         |    |
| Total |   |  | 48 |

# Seminars, practical

# work

| Sectio<br>n<br>number         | No<br>PR | Topics of seminars, practical work  | Numb<br>er of<br>hours | Forms of<br>current<br>control   |
|-------------------------------|----------|---|------------------------|--|
|                               |          | Semester 1  |                        |  |
| Musculosk<br>eletal<br>system | 1        | Anatomical terminology. Axes and planes.<br>General information about the skeleton.<br>Spinal column. Cervical and thoracic<br>vertebrae        | 3                      | interview  |
|                               | 2        | Spinal column. Features of the structure of<br>the lumbar, sacral and coccygeal vertebrae.<br>Structure of ribs                                 | 3                      | interview  |
|                               | 3        | <b>Quiz:</b> structure of the body bones. Bones of the upper and lower limbs.   | 3                      | oral interview<br>interview<br>e   |
|                               | 4        | <b>Quiz:</b> structure of the bones of the limbs.<br>Bones of the brain skull. Frontal, occipital,<br>parietal and sphenoid bones.              | 3                      | oral survey<br>interview   |
|                               | 5        | Bones of the brain skull. Ethmoid and temporal bones. Bones of the facial skull.  | 3                      | interview  |
|                               | 6        | <b>Quiz:</b> structure of the skull bones. External and internal base of the skull. Vertical, facial, lateral and occipital                     | 3                      | oral survey<br>interview   |
|                               | 7        | Quiz: skull as a whole. Control testing:<br>bone structure<br>General information about bone joints.<br>Connection of the bones of the body.    | 3                      | oral<br>questioning<br>solving<br>situational<br>problems<br>tasks<br>tested |
|                               | 8        | <b>Quiz:</b> general arthrology and connection of the bones of the body.(2) Connections of the bones of the skull and the skull with the spine. | 3                      | oral interview<br>interview<br>e<br>situation<br>al solution                 |

| Sectio<br>n<br>number | No<br>PR   | Topics of seminars, practical work  | Numb<br>er of<br>hours | Forms of<br>current<br>control   |
|-----------------------|------------|---|------------------------|--|
|                       | 9          | Quiz:connections between the bones of the<br>skull and torso.<br>Connection of the bones of the shoulder<br>girdle, forearm and hand. Shoulder and<br>elbow joints. Joints of the hand.                                     | 3                      | oral survey<br>interview   |
|                       | 10         | Quiz:connections of the bones of the<br>upper limb.<br>Connection of the pelvic bones. Pelvis as a<br>whole. Hip joint. Knee-joint. Connection<br>of the leg bones.<br>Ankle joint. Connection of the bones of the<br>foot. | 3                      | oral interview<br>interviewe<br>solution of<br>situational<br>problems |
|                       | ele<br>ven | Quiz:connections of the bones of the<br>lower limb.<br>Control testing: connections<br>of bones.<br>Muscles and topography of the back, chest<br>and abdomen.   | 3                      | oral survey<br>interview<br>testing                                    |
|                       | 12         | <b>Quiz:</b> muscles and topography of the back, chest, abdomen. Muscles and topography of the head and neck.   | 3                      | situational<br>solutionoral<br>problems                                |
|                       | 13         | <b>Quiz</b> : muscles and topography of the head<br>and neck (2).<br>Muscles and topography of the upper limb   | 3                      | oral survey<br>interview   |
|                       | 14         | <b>Quiz:</b> muscles and<br>topography of the upper limb. (2) Muscles<br>and topography of the lower limb.  | 3                      | sounon<br>situationaloral<br>problems<br>survey                        |
| Musculosk<br>eletal   | 15         | <b>Quiz</b> : muscles and topography of the<br>lower limb (2). Functional anatomy of the<br>musculoskeletal system (muscle function<br>and joint movements)   | 3                      | oral survey<br>interview   |
| system                | 16         | Quiz:muscle work and joint movements.<br>Control testing: myology<br>Test   | 3                      | writingand<br>oral<br>questioning<br>and testing                       |
| Total:                |            |   | 48                     |  |
|                       |            | Semester 2  |                        |  |
| Splanchno<br>logy     | 1          | General information about the digestive<br>system.<br>Structure of the oral cavity.   | 3                      | interview  |
|                       | 2          | Structure of the pharynx, esophagus, stomach.   | 3                      | interview  |

| Sectio<br>n<br>number  | No<br>PR   | Topics of seminars, practical work   | Numb<br>er of<br>hours | Forms of<br>current<br>control                        |
|------------------------|------------|--|------------------------|---|
|                        | 3          | Small and large intestine.   | 3                      | interview   |
|                        | 4          | Liver and pancreas.  | 3                      | oral<br>survey  |
|                        | 5          | <b>Quiz:</b> structure of the digestive system.<br>Projection of organs onto the anterior<br>abdominal wall. Peritoneum.                               | 3                      | oral survey<br>interview                              |
|                        | 6          | <b>Quiz:</b> structure of the peritoneum.<br>General information about the structure of<br>the respiratory system. External nose, nasal                | 3                      | situational<br>solutions<br>tasks oral<br>questioning |
|                        | 7          | Trachea, bronchi, lungs.   | 3                      | interview   |
|                        | 8          | Pleura. Diaphragm.   | 3                      | interviews<br>e                                       |
|                        | 9          | <b>Quiz:</b> structure of the respiratory system.<br>Diaphragm. Kidneys, ureters, bladder.<br>Urethra  | 3                      | oral<br>interview<br>testing<br>interviews            |
|                        | 10         | <b>Quiz</b> : structure of the organs of the urinary system.<br>Male genital organs.   | 3                      | interviewse<br>solution of<br>situational<br>problems |
| Splanchno<br>logy      | elev<br>en | Control survey:<br>structuremale genital<br>organs.<br>Female genital organs.  | 3                      | situational<br>solutionoral<br>problems               |
|                        | 12         | Control survey:<br>structurefemale<br>genital organs.<br>Male and female crotch.   | 3                      | interviewse<br>oral<br>questioning                    |
|                        | 13         | Controlsurvey:<br>structuremale and<br>female perineum.Anatomy of the endocrine glands.  | 3                      | interviewse<br>oral<br>questioning<br>abstract        |
|                        | 14         | Quiz: anatomy of the endocrine glands.<br>Control testing:<br>splanchnology  | 3                      | testing<br>interview                                  |
| Cordially-<br>vascular | 15         | Functional And clinical anatomy of the heart.  | 3                      | interviews<br>e                                       |
| system                 | 16         | Conduction system of the heart. Heart vessels. Pericardium. Mediastinum.   | 3                      | interview   |
|                        | 17         | Quiz: structure of the heart, mediastinum.<br>Places to listen to heart valves.<br>Arteries of the pulmonary circulation.<br>Aorta, parts, topography. | 3                      | testedsolving<br>situational<br>problems<br>interview |

| Sectio<br>n<br>number | No<br>PR   | Topics of seminars, practical work  | Numb<br>er of<br>hours | Forms of<br>current<br>control                        |
|-----------------------|------------|---|------------------------|---|
|                       | 18         | Common, external and internal carotid arteries.   | 3                      | interview   |
|                       | 19         | Subclavian<br>artery.Bl<br>ood supply to the brain.   | 3                      | interview   |
|                       | 20         | Quiz: arteries of the head and neck. Blood supply to the brain.   | 3                      | oral interview<br>interview<br>e                      |
|                       | 21         | Axillary artery.<br>Arteriesfree upper<br>limb.   | 3                      | interview   |
|                       | 22         | Quiz: structure of the arteries of the upperlimb.ChestAnd abdominalParietal and visceral branches.  | 3                      | interviewse<br>oral<br>questioning                    |
|                       | 23         | <b>Quiz</b> : structure of the arteries of the body.<br>Iliac arteries. Pelvic arteries.  | 3                      | interviewse<br>oral<br>questioning                    |
|                       | 24         | <b>Control</b> survey: iliacarteries, arteries of organs and pelvic walls. Arteries of the free lower limb.   | 3                      | oral survey<br>interview                              |
| The<br>cardiovascul   | 25         | Quiz: structure of the arteries of the lower<br>limb.<br>Control testing: anatomy of the heart and<br>arterial system.  | 3                      | oral<br>interview<br>testing                          |
| ar system             | 26         | Systems of the superior and inferior vena cava.   | 3                      | interviews<br>e                                       |
|                       | 27         | Portal vein. Caval-caval anastomoses.<br>Porto-caval<br>anastomoses.  | 3                      | interviewse<br>solution of<br>situational<br>problems |
|                       | 28         | Fetal circulation.  | 3                      | interview   |
|                       | 29         | <b>Quiz</b> : structure of the venous system.<br>General information about the structure<br>and functions of the lymphatic system.<br>Hematopoietic organs and  | 3                      | interviewse<br>oral<br>questioning                    |
|                       | thir<br>ty | Lymphatic vessels and nodes of the trunk,<br>neck, head and limbs. The drainage of<br>lymph from organs and parts of the body.                                  | 3                      | oral<br>questioning<br>decision<br>situational        |
|                       | 31         | Quiz:structure of the organs of the<br>lymphatic, immune and hematopoietic<br>systems.<br>Blood supply to organs, venous and<br>lymphatic drainage from organs. | 3                      | interviewse<br>oral<br>questioning                    |

| Sectio<br>n<br>number | No<br>PR | Topics of seminars, practical work   | Numb<br>er of<br>hours | Forms of<br>current<br>control                                     |
|-----------------------|----------|--|------------------------|--|
|                       | 32       | Quiz:blood supply to organs, venous and<br>lymphatic drainage from organs.<br>Control testing: venous and lymphatic<br>systems.<br>Test  | 3                      | oral<br>questioning<br>decision<br>situationaltes<br>ting of tasks |
| Total                 |          |  | 96                     |  |
|                       |          | Semester 3   |                        |  |
|                       | 1        | General information about the nervous<br>system. External and internal structure of<br>the spinal cord. Topography of the spinal<br>cord. Somatic reflex arc.  | 3                      | testing<br>interview   |
|                       | 2        | <b>Quiz</b> : structure of the spinal cord.<br>Medulla. Hindbrain.   | 3                      | oral survey<br>interview   |
|                       | 3        | IV ventricle. Diamond-shaped fossa.<br>Isthmus of the rhombencephalon.   | 3                      | interview  |
|                       | 4        | <b>Quiz:</b> structure of departments<br>brain derivatives of the rhombencephalon.<br>Midbrain. Diencephalon.  | 3                      | oral<br>interview<br>survey  |
| Central               | 5        | Quiz: structure of the middle and<br>intermediate parts of the brain.<br>Finite brain. Hemispheres of the cerebrum,<br>cloak. Localization of functions in the<br>cerebral cortex.   | 3                      | e<br>oral survey<br>interview                                      |
| nervous<br>system     | 6        | Quiz:structure of the telencephalon and<br>localization of functions in the cerebral<br>cortex.(2)<br>Finite brain. Olfactory brain, basal ganglia<br>topography of white and gray matter. Lateral<br>ventricles Meninges of the brain. Circulation<br>of cerebrospinal fluid. | l<br>,<br>l            | oral survey<br>interview   |
|                       | 7        | Control survey: structuretelencephalon<br>and meninges (2). Control<br>testing:central nervous system<br>The pathways of the central nervous system.   | 3                      | oral survey<br>testing<br>interview                                |
|                       | 8        | Quiz: pathways of the central nervous<br>system.<br>Organ of vision. Organ of smell and taste.   | 3                      | oral and<br>written survey<br>interview                            |
| Sense<br>organs       | 9        | <b>Quiz:</b> organ of vision, organ<br>smell and taste.<br>Outer, middle and inner ear. Leather  | 3                      | oral survey<br>interview   |

| Sectio<br>n<br>number           | No<br>PR   | Topics of seminars, practical work   | Numb<br>er of<br>hours | Forms of<br>current<br>control     |
|---------------------------------|------------|--|------------------------|------------------------------------|
|                                 | 10         | Quiz:structure of the organ of hearing and<br>balance, skin.<br>Control testing: sensory organs Anatomy<br>of cranial nerves (1-6 pairs). Innervation of<br>the skin and muscles by cranial nerves | 3                      | oral survey<br>interviewteste<br>d |
| Peripheral<br>nervous<br>system | elev<br>en | <b>Quiz</b> : anatomy of cranial nerves 1-6 pairs.<br>Anatomy of cranial nerves (7-12 pairs).<br>Innervation of the skin and muscles by<br>cranial nerves  | 3                      | oral survey<br>interview           |
|                                 | 12         | <b>Quiz</b> : anatomy of cranial nerves 7-12 pairs.<br>Spinal nerves. Cervical plexus. Brachial<br>plexus. Intercostal nerves.<br>Innervation of muscles by spinal nerves by<br>groups             | 3                      | interviewse<br>oral<br>questioning |
|                                 | 13         | <b>Quiz</b> : structure of the cervical, brachial<br>plexuses, intercostal nerves.(2)<br>Lumbar plexus. Sacral plexus. Coccygeal<br>plexus. Innervation of muscles by spinal<br>nerves by groups   | 3                      | oral survey<br>interview           |
| Peripheral<br>nervous<br>system | 14         | Quiz: structure of the lumbar, sacral, coccygeal plexuses. (2)<br>Sympathetic and parasympathetic divisions of the autonomic nervous system.   | 3                      | oral<br>interview<br>testing       |
|                                 | 15         | Autonomic innervation of organs, glands, vessels   | 3                      | interview                          |
|                                 | 16         | Quiz: structure of the autonomic<br>nervous system and innervation of<br>organs.(2)<br>Control testing: peripheral<br>nervous system   | 3                      | oral<br>interview<br>testing       |
| Total                           |            |  | 48                     |                                    |

# 4.3. Independent work of students

| Sectio<br>n<br>number            | Type of independent work of students                | Numb<br>er of<br>hours | Forms of<br>current<br>control |
|----------------------------------|---|------------------------|--------------------------------|
|                                  | Semester 1  |                        |                                |
| N 1 1 1                          | Working with drugs; Solving situational problems    | 24                     | tests, tasks                   |
| Musculoskel<br>etal<br>apparatus | Preparation for current control; Reports, messages  | 12                     | reports, quiz                  |
|                                  | Preparation for intermediate control                | 8                      | interview                      |
| Total                            |   | 44                     |                                |
|                                  | Semester 2  |                        |                                |
| Splanchnologist<br>s I           | Working with drugs; Solving situational problems    | 44                     | tests, tasks                   |
| The<br>cardiovascu               | Preparation for current control; Reports, messages  | 44                     | reports, quiz                  |
| lar system                       | Preparation for intermediate control                | 16                     | interview                      |
| Total                            |   | 104                    |                                |
|                                  | Semester 3  | 1                      | I                              |
| CNS                              | Working with drugs; Solving situational problems    | 20                     | tests, tasks                   |
| PNS                              | Preparation for current control; Reports, messages. | 12                     | reports<br>quizzes             |
| Sense<br>organs                  | Preparation for intermediate control                | 12                     | interview                      |
| Total                            |   | 44                     |                                |

## V. ASSESSMENT FUND FOR CURRENT CONTROL AND INTERMEDIATE CERTIFICATION

The fund of assessment tools for determining the level of development of competencies as a result of mastering the discipline is an appendix to the work program.

## VI. EDUCATIONAL AND METHODOLOGICAL ENSURING DISCIPLINE

#### 6.1. Main literature.

1.Sapin M.R., Human Anatomy T.1: textbook: in 2 volumes / M.R. Sapin [etc.]; edited by M.R. Sapina.- M.: GEOTAR - Media, 2018.- T.1.- 528 p. //EBS "Student Consultant"

2. Sapin M.R., Human Anatomy T.2: textbook: in 2 volumes / M.R. Sapin [etc.]; edited by M.R. Sapina.- M.: GEOTAR - Media, 2018.- T.2. //EBS "Student Consultant"

3. Bilic G.L., Human Anatomy. Atlas. In 3 volumes. Volume 1. Musculoskeletal system: textbook / Bilich G.L., Kryzhanovsky V.A. - M. : GEOTAR-Media, 2013. // EBS "Student Consultant"

4. Bilic G.L., Human Anatomy. Atlas. In 3 volumes. Volume 2. Splanchnology: textbook / Bilich G.L., Kryzhanovsky V.A. - M. : GEOTAR-Media, 2013. // EBS "Student Consultant"

5. Bilic G.L., Human Anatomy. Atlas. In 3 volumes. Volume 3. Angiology. Nervous system: textbook / Bilich G.L., Kryzhanovsky V.A. - M. : GEOTAR-Media, 2013. // EBS "Student Consultant"

#### 6.2. Additional literature.

1. Bilich G.L., Structure of the skull / Bilich G.L., Kryzhanovsky V.A. - M. : GEOTAR-Media, 2014. // EBS "Student Consultant"

2. Kalinin R. E., Human Anatomy. Musculoskeletal system / ed. R. E. Kalinina - M.: GEOTAR-Media, 2017. - 256 p. // EBS "Student Consultant"

3. Sapin M.R., Anatomy and topography of the nervous system: textbook. allowance / M. R. Sapin, D. B. Nikityuk, S. V. Klochkova. - M. : GEOTAR-Media, 2016. // EBS "Student Consultant"

#### **6.3.** List of educational Internet resources

# Scroll Internet resources for 2020-2021 academic year

|       | ELECTRONIC   | <u> </u> |
|-------|--|----------|
|       |  |          |
|       | EDUCATIONALRESOURCES   |          |
| 1.    | Electronic libraryRostGMU. – URL:  |          |
|       | http://109.195.230.156:9080/opacg/   | n        |
| 2.    | Student Advisor: EBS. – Moscow: LLC "IPUZ" URL: <u>http://</u> www.studmedlib.ru   | n n      |
| 3.    | <b>Doctor's consultant.</b> Electronic medical library: EBS. –   | n        |
| 5.    | Moscow: LLC GC "GEOTAR" URL: <u>http://www.rosmedlib.ru</u>  | n        |
| 4.    | <b>UpToDate</b> :DB / Wolters Kluwer Health. – URL: <u>www.uptodate.com</u>  | n        |
| 5.    | ConsultantPlus:referencelegalsystemURL:http://www.consultant.ru  | со       |
|       |  | m        |
| 6.    | Scientific electronic library eLIBRARY URL: <u>http://elibrary.ru</u>  |          |
| 7.    | National electronic library URL: http://neb.rf/  |          |
|       |  | con      |
| 8.    | Scopus/ Elsevier Inc., Reed Elsevier. – Philadelphia: Elsevier BV, PA. –   |          |
|       | URL: <u>http://www.scopus.com/</u> (National project)  | n        |
| 9.    | Web of Science / Clarivate Analytics URL:  |          |
|       | http://apps.webofknowledge.com(National project)   | n        |
| 10.   | <b>ScienceDirect. FreedomCollection</b> [magazines]/ Elsevier. –URL:<br><u>www.sciencedirect.com</u> By IP addressesRostSMU. ( <i>National project</i> ) | n        |
| eleve | DB publishing houses SpringerNatureURL:  |          |
| n.    | http://link.springer.com/ByIP  | n        |
|       | addresses RostSMU.(National project)   |          |
| 12.   | WileyOnlineLibrary / JohnWiley&Sons URL:   |          |
|       | <u>http://onlinelibrary.wiley.com</u> By IP addresses RostSMU.(National  | com      |
| 13.   | project)<br>One window access To   | <u> </u> |
| 13.   | One window access To<br>informational resourcesURL:  |          |
|       | http://window.edu.ru/  |          |
| 14.   | Russian education. Federal educational portal  |          |
|       | URL: <u>http://www.edu.ru/index.php</u>  |          |
| 15.   | <b>ENVOC.RUEnglishvocabulary</b> ]: educational website For studyingEnglish language - URL: <u>http://envoc.ru</u>                                       |          |
| 17.   | WordReference.com:online linguistic dictionaries   |          |
|       | URL: <u>http://www.wordreference.com/enru/</u>   |          |
| 21.   | Federal Electronic Medical Library of the Ministry of Health   |          |
|       | Russia URL: <u>http://www.femb.ru/feml/</u> , <u>http://feml.scsml.rssi.ru</u>   |          |
|       |  |          |

|         | 22.  |        |  |
|---------|--|--------|--|
|         | Medline (PubMed, USA).– URL: <u>https://www.ncbi.nlm.nih.gov/pubmed/</u> |        |  |
|         | 23.  |        |  |
|         | Free Medical JournalsURL: <u>http://freemedicaljournals.com</u>          |        |  |
|         |  |        |  |
| 26.     | CyberLeninka: electronic bib URL:  | Open   |  |
| 20.     | scien  | access |  |
|         | tific <u>http://cyberleninka.ru/</u>                                     |        |  |
| 07      | Archive scientific / NEICON URL:   | Open   |  |
| 27.     | magazines <u>https://archiv</u>  | access |  |
|         | <u>e.neicon.ru/xmlui/</u>  |        |  |
|         | Open access journals in Russian /ElPub NEICON platform. –                | Open   |  |
| 28.     | URL: <u>https://elpub.ru/</u>  | access |  |
|         | Medical Herald South -   | Open   |  |
| 29.     | Russia.URL: <u>https://www.medicalheral</u>                              | access |  |
|         | <u>d.ru/jour</u> or from the RostSMU website                             |        |  |
|         | Worldwide organization health URL:                                       | Open   |  |
| thirty. | http://who.int/ru/   | access |  |
|         | Evrika.ruinformation and educational portal for doctors. –               | Open   |  |
| 31.     | URL: <u>https://www.evrika.ru/</u>                                       | access |  |
|         | Med-Edu.ru:medical video portal URL: <u>http://www.med- edu.ru/</u>      | Open   |  |
| 32.     |  | access |  |
|         | Univadis.ru: international medical portal - URL:                         | Open   |  |
| 33.     | http://www.univadis.ru/  | access |  |
|         | <b>DoctorSPB.ru</b> : information-reference portal O - URL:              | Open   |  |
| 34.     | medicine.http://doctorspb.ru/  | access |  |
|         | Modern problems of science and education: electronic magazine.           | Open   |  |
| 35.     | - URL:http://www.science-education.ru/ru/issue/index                     | access |  |
| L       |  |        |  |

## 6.4. Software, information help systems:

*Consultant Plus*[*Electronic resource*]: *reference. legal system.* - Access mode:http://www.consultant.ru

#### 6.5. Guidelines for students on mastering the discipline:

1. Chaplygina E.V. Collection of educational and methodological materials for current and intermediate control in anatomy for students of the medical and preventive faculty / E.V. Chaplygina, O.A. Kaplunova, I.V. Sankova [and others]. – Rostov n/d: Publishing house Rost State Medical University, 2016. - 106 p.

The same [Electronic resource]: electronic copy. - Access from EUB RostSMU.

#### VII. MATERIAL AND TECHNICAL SUPPORT OF DISCIPLINE

educational program in the field of training: MEDICINE

| No. | Disciplines<br>(modules): | Address (location) of classrooms, names<br>of equipped classrooms, facilities for<br>practical and laboratory classes, physical<br>education and sports facilities with a list<br>of main equipment | Equipment of the classroom<br>(technical means, sets of<br>demonstration equipment, laboratory<br>equipment, etc.) | Number of<br>computersto<br>access the<br>Internet |
|-----|---------------------------|---|--|--|
|     |                           |   |  |  |

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
|   |   |   |   |   |

| 1 | Anotomy | 8th floor of the sub-faculty of | 8 study tables, 1 table          |  |
|---|---------|---------------------------------|----------------------------------|--|
|   | Anatomy | Growth of State Medical         | teacher, 25 chairs, blackboard,  |  |
|   |         | University, educational and     | desk, hanger.                    |  |
|   |         | laboratory building             | desk, hanger.                    |  |
|   |         | No. 2,                          |                                  |  |
|   |         | Rostov-on-Don,                  |                                  |  |
|   |         | Kirovsky district,              |                                  |  |
|   |         | st. Suvorov No. 119/80 (LiterA) |                                  |  |
|   |         | classroom                       |                                  |  |
|   |         | No. 807(No. 6):                 |                                  |  |
| 2 | Anatomy | 8th floor of the sub-faculty of | 11 study tables, 1 table         |  |
|   |         | Growth of State Medical         | teachers, 23 chairs,             |  |
|   |         | University, classroom           | educational board, desk,         |  |
|   |         | No. 812(No. 8):                 | hanger.                          |  |
| 3 | Anatomy | 8th floor of the sub-faculty of | 12 study tables, 1 table         |  |
|   | 5       | Growth of State Medical         | teacher, 25 chairs,              |  |
|   |         | University, classroom           | blackboard, desk                 |  |
|   |         | No. 814(No. 10):                | hanger.                          |  |
| 4 | Anatomy | 8th floor of the sub-faculty of | 9 study tables, 1 table          |  |
|   |         | Growth of State Medical         | teacher, 25 chairs, blackboard,  |  |
|   |         | University, classroom           | desk, hanger.                    |  |
|   |         | No. 815(No. 11):                |                                  |  |
| 5 | Anatomy | 8th floor of the sub-faculty of | Bone preparations, wet           |  |
|   |         | Growth of State Medical         | preparations for the section     |  |
|   |         | University,                     | splanchnology and the central    |  |
|   |         | "laboratory" No. 801            | nervous system, tablets for the  |  |
|   |         | "a": racks and cabinets for     | section myology and              |  |
|   |         | drugs, containers for wet       | splanchnology, models for the    |  |
|   |         | drugs.                          | section arthrology,              |  |
|   |         |                                 | splanchnology, angiology,        |  |
|   |         |                                 | peripheral nervous system.       |  |
|   |         |                                 | Laptop and multimedia            |  |
|   |         |                                 | projector (for presentations and |  |
|   |         |                                 | educational films). Tables. Sets |  |
|   |         |                                 | of radiographs, CT-grams,        |  |
|   |         |                                 | SCT-grams, MRI-grams of          |  |
|   |         |                                 | body areas, organs and systems   |  |
|   |         |                                 | for splanchnology and            |  |
|   |         |                                 | cardiovascular systems.          |  |
|   |         |                                 |                                  |  |
|   |         |                                 |                                  |  |
| 6 | Anatomy | Rostov-on-Don,                  | Interactivemultimedia            |  |
|   |         | Kirovsky district,              | complex (for lecture             |  |
|   |         | lane Nakhichevan No. 38/56-     | presentations) -                 |  |
|   |         | 58/212-214 (Liter L)            | "Basis", wall and projection     |  |
|   |         | Lecture hall                    | screen, magnetic marker          |  |
|   |         | building (No. 17) of the        | board.                           |  |
|   |         | Department of Normal Anatomy    |                                  |  |
|   |         | for 150 seats.                  |                                  |  |

| 7          | Anatomy | Anatomical Museumbuilding<br>of the department of normal<br>anatomy (No. 16)    | Collection of natural dry and<br>wet preparations for all<br>sections of anatomy; bone<br>preparations normal and with<br>abnormalities; some drugs with<br>developmental defects.<br>Dissected muscular and<br>vascular cadavers for studying<br>topographic issues. Egyptian<br>mummies (2). Collection of<br>animal and bird skulls<br>(comparative anatomy).<br>Collection of corrosive and<br>cleared preparations. A<br>collection of radiographs, CT<br>images, SCT images, MRI<br>images of body areas, organs |  |
|------------|---------|---|--|--|
|            |         |   | and systems in various<br>sections of anatomy.<br>Used in classes<br>educational purposes.   |  |
| 8          | Anatomy | <b>Skull Museum</b><br>Department No. 17 "in" building<br>of normal anatomy     | Collection of skulls of<br>residents of the South of<br>Russia: normal and with<br>anomalies, skulls of<br>newborns and adults<br>(quantity about 300 pcs.)  |  |
| 9          | Anatomy | Classroom No. 1, building of<br>the Department of Normal<br>Anatomy             | 7 study tables. 1 table<br>teacher, 17 chairs,<br>blackboard, X-ray viewer.<br>hanger  |  |
| 10         | Anatomy | Classroom No. 3, building of<br>the Department of Normal<br>Anatomy             | 7 study tables, 1 table<br>teacher, 17 chairs,<br>educational board, X-ray<br>viewer, hanger.  |  |
| eleve<br>n | Anatomy | Classroom No. 11 "a" of the<br>building of the Department of<br>Normal Anatomy: | 15 study tables. 1 table<br>teacher, 40 chairs, educational<br>board, TV for showing<br>educational films, X-ray<br>viewer, hanger.  |  |
| 12         | Anatomy | Classroom No. 11, building of<br>the Department of Normal<br>Anatomy:           | 8 study tables, 1 table<br>teacher, 20 chairs, blackboard,<br>TV for showing educational<br>films, work desk, X-ray viewer,<br>hanger.   |  |

| 13 | Anatomy    | Classroom No. 13, building of                             | 11 study tables, 1 table         |
|----|------------|---|----------------------------------|
|    | - mailenty | the Department of Normal                                  | teacher, 27 chairs,              |
|    |            | Anatomy:  | blackboard, X-ray viewer,        |
|    |            |   | hanger.                          |
| 14 | <b>A</b>   | Classroom No. 9,  | 7 teaching tables, 1             |
| 14 | Anatomy    | building  | teacher's table, 20 chairs,      |
|    |            | Department of Normal Anatomy:                             | teaching board, X-ray            |
|    |            | Department of Normal Anatomy.                             | viewer, hanger.                  |
|    |            |   | viewer, nanger.                  |
| 15 | Anatomy    | Room No. 18 of the  | Bone preparations, wet           |
|    | Anatomy    | normal department building                                | preparations for the section     |
|    |            | anatomy:  | splanchnology and the central    |
|    |            | "laboratory":racks and                                    | nervous system, tablets for the  |
|    |            | cabinets for drugs,                                       | section myology and              |
|    |            | containers for wet drugs.                                 | splanchnology, models for the    |
|    |            |   | section arthrology,              |
|    |            |   | splanchnology, angiology,        |
|    |            |   | peripheral nervous system.       |
|    |            |   | Laptop and multimedia            |
|    |            |   | projector (for presentations and |
|    |            |   | educational films). Tables. Sets |
|    |            |   | of radiographs, CT-grams,        |
|    |            |   | SCT-grams, MRI-grams of          |
|    |            |   | body areas, organs and systems   |
|    |            |   | for splanchnology and            |
|    |            |   | cardiovascular systems.          |
|    |            |   |                                  |
|    |            |   |                                  |
| 16 | Anatomy    | Room No. 2 of the   | Containers for storing wet       |
| -  |            | normal department building                                | biological products. Wet         |
|    |            | anatomy   | biological products by           |
|    |            | "laboratory"  | section:                         |
|    |            |   | splanchnology and central        |
|    |            |   | nervous system                   |
| 17 | Anatomy    | Room No. 17 "a" of the                                    | 3 desktops, laptop, printer,     |
|    |            | building of the department of                             | scanner.<br>Tools, materials and |
|    |            | normal  | solutions for the restoration    |
|    |            | anatomy   | of museum preparations.          |
|    |            | "laboratory"  | I I T                            |
|    |            | at the anatomical museum for                              |                                  |
|    |            | preventive maintenance of preparations of the educational |                                  |
|    |            | anatomical museum   |                                  |
| L  | 1          | ministini var maboum                                      |                                  |

| <sup>18</sup> Anatomy | Room No. 17 "b" of the<br>building of the Department of<br>Normal Anatomy<br>"laboratory"for<br>preventive<br>restoration of drugs used<br>in the educational process<br>of the department. | 2 work tables, drying cabinet.<br>Tools and materials for<br>restoration of educational<br>preparations. |  |
|-----------------------|---|--|--|
|-----------------------|---|--|--|

| Sum of points | Ratings |
|---------------|---------|
| 85 -100       | 5       |
| 71 - 84       | 4       |
| 60 - 70       | 3       |
| 60 - 100      | passed  |
| 0-59          | 2       |

#### CHECKLIST

by discipline:**anatomy** 

intermediate certification

form:*test*Department normal anatomy Well1 Semester1 Speciality05/31/01 General medicine

Number of credit score Number of points for 1 control event\* No. Types of control events Current control: 3-5 17 from 3 to 5 solving situational problems with 70% of the material passed and oral interview 75% of classes attended test control Frontier control: 3 3-5 testing Total

Accrual of bonus points: speaking at conferences, club meetings, publication of scientific work, production of anatomical preparations, participation in the anatomical Olympiad (1-5)

I approve Head of department FULL NAME.

#### Appendix 2

| Sum of points | Ratings |
|---------------|---------|
| 85 -100       | 5       |
| 71 - 84       | 4       |
| 60 -70        | 3       |
| 60 - 100      | passed  |
| 0-59          | 2       |

#### CHECKLIST

#### by discipline: anatomy

#### intermediate certification

form:*test*Department\_normal anatomy Well1 Semester 2

Specialty 05/31/01\_ General Medicine

| No. | Types of control                     | Number of points for 1 control event* | Number of events | credit score  |
|-----|--------------------------------------|---------------------------------------|------------------|---|
|     | Current control:                     | 3-5                                   | 17               | from 3 to 5   |
|     | test control,                        |                                       |                  |   |
|     | solving situational problems         |                                       |                  | with 70% of the material passed and 75% of classes attended |
|     | oral interview                       |                                       |                  |   |
|     | <b>Frontier control</b> :<br>Testing | 3-5                                   | 3                |   |
|     | Total                                |                                       |                  |   |

Accrual of bonus points: speaking at conferences, club meetings, publication of scientific work, production of anatomical preparations, participation in the anatomical Olympiad (1-5)

# Appendix 2

*I approve* Head of department\_\_\_\_FULL NAME.

| Sum of points | Ratings |
|---------------|---------|
| 85 -100       | 5       |
| 71 - 84       | 4       |
| 60 -70        | 3       |
| 60 - 100      | passed  |
| 0-59          | 2       |

Appendix 2

## CHECKLIST

## by discipline: anatomy

*I approve* Head of department\_\_\_\_\_FULL NAME.

#### intermediate certification

form:*exam*Department\_normal anatomy Well2 Semester\_3 Specialty 05/31/01\_ General Medicine

|  | No. | Types of control             | Number of points for 1 control event* | Number of events | number of points |
|--|-----|------------------------------|---------------------------------------|------------------|------------------|
|  |     | Current control:             | 3-5                                   | 17               |                  |
|  |     | test control,                |                                       |                  |                  |
|  |     | solving situational problems |                                       |                  |                  |
|  |     | oral interview               |                                       |                  |                  |
|  |     | Frontier control:            | 3-5                                   | 3                |                  |
|  |     | Testing                      | 5-5                                   |                  |                  |
|  |     |                              |                                       |                  |                  |

Accrual of bonus points: speaking at conferences, club meetings, publication of scientific work, production of anatomical preparations, participation in the anatomical Olympiad (1-5)