

**Academic programme
component**

**31.05.01 General Medicine
programme**

**B1.0.19
discipline code**

SYLLABUS

Discipline B1.0.19 Anatomy

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Approved at the meeting of the
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Record no. _____ dated

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Clarification

Discipline volume: 11 credit points

1. Discipline (module) training results correlated with the indicators of competencies achievement determined by the educational programme

Competency	Indicators of competency achievement	Discipline (module) training results
<p>OПК-5. Can analyze morphofunctional and physiological indicators as well as pathological processes in human body to achieve professional goals</p>	<p>ИД-3ОПК-5. Defines and analyzes morphological, functional, physiological conditions and pathological processes in the human body based on knowledge about the structure and topography of internal organs</p>	<p>To know:</p> <ul style="list-style-type: none"> - the normal structure and topography of the organs and systems of the body; - patterns of functioning of organs and systems, their regulation; - structure and functions of cells, their metabolism; development of tissues and their functions; - the chemical composition and properties of substances that make up living systems, their mutual transformations in the process of metabolism, as well as the role of metabolic processes in the functioning of various organs and tissues in normal and pathological conditions; - morphology, physiology of microorganisms, methods of their cultivation; <p>To be able to:</p> <ul style="list-style-type: none"> - evaluate and compare normal and altered morphofunctional indicators; <p>To master:</p> <ul style="list-style-type: none"> - skills of an integrated approach to assessing the functions of body systems

2. Discipline contents

№	Topic	Contents
1.	Introduction. Musculoskeletal system	<p>The content of the subject. The history of anatomy. The history of Russian anatomy.</p> <p>The notion of organs and organ systems. Human and nature. Anatomy terminology.</p> <p>Osteology: bones of the axial skeleton, limbs skeleton, skull.</p> <p>Arthrology: bones of the trunk and skull connection, extremities connection.</p> <p>Myology: muscles and fascia of the trunk, chest, abdomen, limbs, head and neck.</p>
2.	Splanchnology	<p>The digestive system. The respiratory system. The urinary system. The reproductive system. General patterns of structure. Primary and secondary organs of the immune system.</p>

3.	The cardiovascular system Organs of the immune system	The heart. Arteries of the pulmonary blood circulation. Arteries of the systemic blood circulation: arteries of the head, neck, trunk and extremities. Veins. The lymphatic system, its components – general information.
4.	Endocrine glands	Pituitary gland, pineal gland, thyroid gland, parathyroid glands, adrenal glands, endocrine part of pancreas and gonads
5.	The nervous system	The general structure. The central nervous system. The spinal cord. The brain. The central nervous system pathways. The membranes of the spinal cord and brain. The peripheral nervous system. Nerves, plexuses. The autonomic nervous system: sympathetic and parasympathetic divisions.
6.	Estesiology	The eye, the ear, the organs of smell and taste. The skin.

3. Training support materials

- multimedia presentations on the discipline are available on MAU LMS Moodle;
- practical training manuals are available on MAU LMS Moodle;
- learning materials are available on MAU official website at «[Информация по образовательным программам, в том числе адаптированным](#)».

4. Discipline assessment materials

Discipline assessment materials is a separate document within the educational programme, it includes:

- a list of competencies indicating the stages of their achievement within the discipline;
- formative assessment tasks;
- interim assessment tasks;
- tasks for internal assessment of education quality.

5. The list of main and supplementary literature (printed sources, electronic textbooks and (or) resources of Digital Library Systems)

Main literature:

1. Атлас анатомии человека: [учебное пособие для студентов медицинских вузов] : в 4 томах. Том 1. Учение о костях, соединениях костей и мышцах / под общей редакцией А. Г. Цыбулькина. – Изд. 8-е, перераб. – Москва : Новая волна : Издатель Умеренков, 2019. – 488 с. : цв. ил. – Предм. указ.: с. 461-487. – ISBN 978-5-7864-0305-4 (Новая волна). – ISBN 978-5-94368-069-4

2. Атлас анатомии человека : [учебное пособие для студентов медицинских вузов] : в 4 томах. Том 1. Учение о костях, соединениях костей и мышцах / под общей редакцией А. Г. Цыбулькина. – Изд. 8-е, перераб. – Москва : Новая волна : Издатель Умеренков, 2020. – 488 с. : цв. ил. – Предм. указ.: с. 461-487. – ISBN 978-5-7864-0323-8 (Новая волна). – ISBN 978-5-94368-069-4

3. Атлас анатомии человека : [учебное пособие для студентов медицинских вузов] : в 4 томах. Том 2. Учение о внутренностях и эндокринных железах / под общей редакцией А. Г. Цыбулькина. – Изд. 8-е, перераб. – Москва : Новая волна : Издатель Умеренков, 2020. – 272 с. : цв. ил. – Предм. указ.: с. 258-272. – ISBN 978-5-7864-0306-1 (Новая волна). – ISBN 978-5-94368-070-0

4. Атлас анатомии человека : [учебное пособие для студентов медицинских вузов] : в 4 томах. Том 2. Учение о внутренностях и эндокринных железах / под общей редакцией

А. Г. Цыбулькина. – Изд. 8-е, перераб. – Москва : Новая волна : Издатель Умеренков, 2020. – 277 с. : цв. ил. – Предм. указ.: с. 257-275. – ISBN 978-5-7864-0321-4 (Новая волна). – ISBN 978-5-94368-070-0

5. Атлас анатомии человека : [учебное пособие для студентов медицинских вузов] : в 4 томах. Том 3. Учение о сосудах и лимфоидных органах / научные редакторы А. Г. Цыбулькин, Т. В. Горская. – Изд. 7-е, перераб. – Москва : Новая волна : Издатель Умеренков, 2020. – 215, [1] с. : цв. ил. – Предм. указ.: с. 202-216. – ISBN 978-5-7864-0324-5 (Новая волна). – ISBN 978-5-94368-052-6 (Издатель Умеренков) [Гриф]. –

6. Атлас анатомии человека : [учебное пособие для студентов медицинских вузов] : в 4 томах. Том 4. Учение о нервной системе и органах чувств / под редакцией А. Г. Цыбулькина. – Изд. 7-е, перераб. – Москва : Новая волна : Издатель Умеренков, 2021. – 315 с. : цв. ил. – Предм. указ.: с. 295-315. – ISBN 978-5-7864-0325-2 (Новая волна). – ISBN 978-5-94368-053-3

7. Сапин, М. Р. Анатомия человека : учебник / Сапин М. Р. - Москва : ГЭОТАР-Медиа, 2020. - 528 с. - ISBN 978-5-9704-5285-1. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <https://www.studentlibrary.ru/book/ISBN9785970452851.html> (дата обращения: 01.04.2024). - Режим доступа : по подписке.

8. Сапин, М. Р. Анатомия человека : атлас : учеб. пособие для медицинских училищ и колледжей / М. Р. Сапин, З. Г. Брыксина, С. В. Чава. - Москва : ГЭОТАР;Медиа, 2018. - 376 с. : ил. - 376 с. - ISBN 978-5-9704-4760-4. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <https://www.studentlibrary.ru/book/ISBN9785970447604.html> (дата обращения: 01.04.2024). - Режим доступа : по подписке.

Supplementary literature:

9. Замараев, В. А. Анатомия : учебное пособие для вузов / В. А. Замараев. — 2-е изд., испр. и доп. — Москва : Издательство Юрайт, 2020. — 268 с. — (Высшее образование). — ISBN 978-5-534-07276-1. — Текст : электронный // ЭБС Юрайт [сайт]. — URL: <http://biblio-online.ru/bcode/452556>

10. Кабанов, Н. А. Анатомия человека : учебник для вузов / Н. А. Кабанов. — Москва : Издательство Юрайт, 2020. — 464 с. — (Высшее образование). — ISBN 978-5-534-09075-8. — Текст : электронный // ЭБС Юрайт [сайт]. — URL: <http://biblio-online.ru/bcode/456030>

6. Professional databases and information reference systems

1) The state legal information system - the official website of legal information - URL: <http://pravo.gov.ru>

2) Information system "Single window of access to educational resources" - URL: <http://window.edu.ru>

3) Jaypeedigital (<https://www.jaypeedigital.com/home>) – online-platform of medical resources from Jaypee Brothers Medical Publishers

Introduction to the platform (in English): https://disk.yandex.ru/i/K3Q61Zerp_x5Kw

4) S Ebooks (Medical & Science) (<https://eduport-global.com/>) - electronic library of medical literature from CBS Publishers & Distributors Pvt. Ltd.

5) Legal reference system. Consultant Plus - URL: <http://www.consultant.ru/>

6) University Library Online <https://biblioclub.ru> (Access until May 29, 2025)

7) Electronic library system "Lan" <https://e.lanbook.com/> (Access until October 1, 2024)

8) Electronic library system “IPRsmart Digital Educational Resource” <http://iprbookshop.ru/> (Access from April 20,2016, until April 19, 2024)

9) Electronic library system “Lan” – electronic library of licensed educational and professional literature e.lanbook.com

7. The list of licensed and openly distributed software, including domestic software

1. Microsoft Windows Vista Business Russian Academic OPEN operating system, license No. 44335756 dated 07/29/2008 (Agreement No.32/379 dated 07/14/08)

2. Microsoft Office 2007 Russian Academic OPEN Office Package, license No. 45676388 dated 07/08/2009 (Agreement 32/224 dated 07/14/2009)

3. Microsoft Office 2010 Russian Academic OPEN Office Package, license No. 47233444 dated 07/30/2010 (Agreement 32/285 dated July 27, 2010)

4. ABBYY FineReader Corporate 9.0 Optical text recognition system (network version), 2009 (Agreement LC-080000510 dated April 28, 2009)

5. Antivirus programme (contract No.7689 dated 07/23/2018 for the Dr.Web Desktop Security Suite Antivirus programme)

8. Ensuring mastering the discipline for people with special needs

Students with special needs are provided with printed and (or) electronic educational resources adapted to their needs.

9. **The material and technical support of the discipline (module)** is presented in the appendix to the academic programme "Material and technical conditions for the implementation of the educational programme" and includes:

- classrooms for conducting training sessions provided for by the specialty programme, fitted with technical equipment;
- spaces for self-study work fitted with computer equipment with the Internet connection and access to MAU LMS Moodle.

10. Study load distribution by type of educational activity

Table 1 - Study load distribution

Educational activity	The discipline (module) study load distribution by the forms of training					
	Full-time					
	Semester /year	Total hours	Semester/ year	Total hours	Semester /year	Total hours
	1/1		1/2		2/3	
Lectures	24	24	28	28	28	28
Seminars	48	48	56	56	56	56
Self-study work	72	72	24	24	24	24
Preparation for interim assessment	-				36	36

Total number of hours / in the form of seminars	144	144	108	108	144	144
	48	48	56	56	56	56

Interim and formative assessment

Examination					+	
Credit / graded credit						

The list of seminars by the forms of training

№	Seminar topics
1	2
1	Introduction to anatomy, basic notions, terms, axes, lines, methods.
2	Osteology: classification of bones, bones of the trunk: vertebrae, sternum, ribs; bones of the head; bones of the upper and lower extremities.
3	Syndesmology: types of bone connections; connections of bones of the skull, trunk, upper and lower extremities. Muscles of the trunk (back, chest, abdomen), muscles of the head, muscles of the upper and lower extremities.
4	Splanchnology: organs of the digestive system, structure, topography. Organs of the respiratory system, structure, topography. Organs of the urinary system, structure, topography. Organs of the reproductive system (male, female), structure, topography. The cardiovascular system: the heart, structure, topography. General characteristics of vessels, classification. Vessels of the pulmonary circulation, vessels of the systemic circulation, topography. Veins, structural features, the superior and inferior vena cava system, portal vein system, topography. The lymphatic system, the structure of the system elements, topography.
5	Organs of the endocrine system: the structure and topography of the endocrine and mixed system glands.
6	The nervous system. CNS: the structure of the spinal cord and brain, the pathways of the central nervous system, ventricles and membranes of the brain; cranial nerves, exits from the skull, topography, area of innervation. Peripheral nervous system: spinal nerves, plexuses, topography, area of innervation. ANS: divisions, topography of nerves, plexuses, areas of innervation.
7	Estesiology, the structure of the organ of vision, ear, organs of smell and taste.