

MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC  
 OSH STATE UNIVERSITY  
 INTERNATIONAL MEDICAL FACULTY  
 DEPARTMENT OF HUMAN ANATOMY, HISTOLOGY AND PHYSIOLOGY

TRAINING PROGRAM  
 (Syllabus)

BY DISCIPLINE: **Human anatomy 1**  
 for full-time students  
 in the specialty " **560001-General Medicine** "

Specialty (direction)	General medicine (GM)"	Course code	560001
Language of instruction	English	Discipline	Human Anatomy 1
Training year	2025-2026y	Quantity credits	5
Information about the teacher :	Asanbek kyzy K	Semester :	I semester
E-mail	kasanbekkyzy@oshsu.kg	Opening hours:	From Monday- Saturday daily from 8:00 to 17:30.
Consultations ( time / aud .)	Room 106	Location ( building / room )	106 Morpho Corpus
Form of study (full-time/part- time/evening/dista nce)	on constant basis	Course type: (required)	Necessarily

of the human body, the structure of organs and organ systems, their topography and development based on modern achievements in macro- and microscopic anatomy, as well as the formation of general professional medical competence in matters of the structural organization of the main processes of the body's vital activity.

#### Objectives of the discipline:

- To develop knowledge of the structure of the human body, both as a whole and its individual organs, and their topographic relationships of systems, X-ray imaging based on modern achievements of macro- and microscopic anatomy;
- To develop the skills to navigate the complex structure of the human body, to accurately and precisely find and determine the locations and projections of organs and their parts on the surface of the body, i.e. mastery of "anatomical material" for understanding pathology, diagnosis and treatment;
- To examine individual, gender and age-related characteristics of organs and systems, including organogenesis, to show variants of variability and developmental defects.
- To develop a scientific understanding of the interdependence and unity of structure and function, using the principles of an integrated approach and synthetic understanding of both individual organs and the organism as a whole, their variability in the process of phylo- and ontogenesis;

To cultivate ethical standards of behavior in the "anatomical theater", a respectful and careful attitude towards the object being studied – the organs of the human body, towards the corpse, which are studied in the name of a living person;

## 2. LEARNING OUTCOMES OF THE DISCIPLINE

3. Prerequisites	Histology, Latin, : Chemistry, Biophysics, SPD : Molecular Biology and Medical Genetics, Medical Biology,	
4. Post-requisites	Topographic anatomy. Pathological anatomy , Clinical anatomy.	
Co-requisites (as needed)	Physiology, Medical anthropology	
Results training disciplines		
By the end of the course, the student: will achieve the following learning outcomes ( ROd ) corresponding to the expected results of mastering the educational program ( ROop ) and will have the corresponding competencies:		
RT (result training) OOP	RT disciplines	Competencies
RJSP-1: able to use basic knowledge of the humanities, natural sciences and economics in professional work;	ROD-1: is able and ready to analyze the basic physical phenomena and biological patterns underlying the processes occurring in the human body, the origin and development of life, human anthropogenesis and ontogenesis;	<b>Knows and understands :</b> <ul style="list-style-type: none"><li>• the main directions and stages of development of anatomical science, its importance for medicine and biology, methods of anatomical research;</li><li>• the basic laws of development and vital activity of the human body, based on the structural organization of organs and systems;</li></ul> <b>Can:</b> accurately and correctly identify parts and areas of the human body; determine the main bone formations, joint spaces, muscle contours and their projection onto the body surface; <b>Owns skills:</b> informational search in SCOPUS, WoS , PubMed And etc., and applications medical-anatomical conceptual apparatus and the ability to use it



		Excel , Google ChatGPT , Canva
<b>RJSP -2</b> Ability to use modern communication technologies, including in a foreign language, for academic and professional interaction	<b>ROd-2:</b> able and ready to understand issues of structural and functional organization of organs and systems, determining their location and projection on the surface of the body, correct description using anatomical terms used in modern medical practice, taking into account age, gender and individual	<p><b>Knows And understands :</b> anatomical and topographic relationships between individual organs and parts of the human body;</p> <ul style="list-style-type: none"> <li>• blood supply, lymph drainage and innervation of organs;</li> <li>• anatomical terms according to the International Anatomical Nomenclature.</li> </ul> <p><b>Can:</b> accurately and reliably determine the location of the main blood vessels and nerves, and the pulsation points of the arteries.</p> <p><b>Possesses skills</b> in basic information transformation technologies; independent work with educational literature on paper and electronic media, Internet resources on human anatomy;</p>
<b>RJSP 7 –</b> Able to apply basic knowledge in the field of diagnostic activities to solve professional problems	<b>PC-15 :</b> able and ready to analyze the patterns of functioning of individual organs and systems, use knowledge of anatomical and physiological characteristics, basic methods of clinical and laboratory examination and assessment of the functional state of the body of an adult and children, for timely diagnosis of diseases and pathological processes	<p><b>Knows and understands:</b> the structure, functions, topography and development of all organs and systems of the body, taking into account age, gender and individual characteristics;</p> <ul style="list-style-type: none"> <li>• possible structural variants, main anomalies and developmental defects of organs and their systems;</li> </ul> <p><b>Can:</b> accurately and reliably determine the location and projection of organs on the surface of the body and in relation to the skeleton;</p> <p><b>Proficiency:</b> Capable show and palpate the main bone landmarks on the human body and correctly name them in Latin, and also use the acquired knowledge for modern diagnostics of diseases and pathological processes</p>
<b>RJS11 -</b> Able to apply basic knowledge in the field of scientific research activities to solve professional problems	<b>ROd-3 :</b> able and ready to use educational, scientific, popular science literature to carry out scientific research using anatomical methods , taking into account the principles of systemic anatomy, to determine the body type based on anthropometric data	<p><b>Knows and understands :</b> Uses knowledge and modern methods and advanced training courses that require an understanding of deep anatomical structures.</p> <p><b>Can:</b> carry out search, critical analysis and synthesis of information, apply a systematic approach to solving the assigned tasks</p> <p><b>Can:</b> make judgments based on the information received, taking into account social, ethical and scientific considerations using Internet resources, and is also able and ready to plan and conduct scientific research PC-32</p>

## 5. Technological map of the discipline in 1 semesters

Discipline	Credit	Aud. hour	S/W S/Wt	1-module (25 points)				2-module (25 points)				Exam (50 points)
		40%	60%	Aud. watch		S/W S/Wt (s)	RK (r)	Audience hours		S/W S/Wt (s)	RK (r)	IR (E)
				lek	pr			lek	pr			
PC	5	60	90	24	36	9/4		24	36	9/4		
OOC	5	60	90	24	36	9/4		24	36	9/4		
Map savings points				4	4	8	9	4	4	8	9	50
Module and exam score results				(M = t <sub>avg</sub> + r + s) to 25				(M = t <sub>avg</sub> + r + s) to 25/				50
				R <sub>add.</sub> = M <sub>1</sub> + M <sub>2</sub> (30- 50)								
Final grade				I = R <sub>add.</sub> + E = 100								100

6. Map of accumulation of points for the discipline "Human Anatomy1" in terms of modules (1 semester, 2025-2026 academic year, specialty: 560001-medical care "GM")

No.	Name groups	Average score of current practical classes	Lecture	SWw T	Module	General
	Name / Surname student	4 points	4 points	8 points	9 points	25 points
1.						
2.						

Module	(M = t <sub>avg 8</sub> + r 9 + s 8)	= 25
R <sub>add.</sub> =	M <sub>1</sub> + M <sub>2</sub>	50 = 25 + 25
I =	R <sub>add.</sub> + E	100 = 50 + 50

T<sub>avg</sub>-Practical classes

r 9-module test

s 8- S/Work

### 7. Brief summary of the discipline:

#### Sceleto-mascular system:

- Bone system;
- Joints;
- Craniology;
- Muscular system;
- **Splanchnology:**
- Digestive system;
- Respiratory system;
- Urinary system;

- Reproductive system;
- Endocrine system;
- immune system;

**8. Calendar and thematic plan of lectures  
for students of the specialty 560001 - General Medicine (LP)  
(1st semester 2025-2026 years . )**

No. week.	Name topics	Quantity hours	Points			
			visit pup py ie	Test (For TC), oral, written th survey	manage ment lecture noteboo k	total
	<b>1-module</b>					
1.	Introduction to the subject. Organization of the educational process in department.	2 h	-	3	1	4
2.	General anatomy and development of skeletal system	2 h	-	3	1	4
3.	General anatomy of the skeletal joints and its development	2 h	-	3	1	4
4.	General anatomy and development of skull bones.	2 h	-	3	1	4
5.	Introduction to myology. Anatomy of muscles of head and neck. Anatomy of muscles of thorax and abdominal regions..	2 h	-	3	1	4
6.	Anatomy of muscles of upper and lower limb.	2 h	-	3	1	4
	<b>Module No. 1: " MUSCULOSKELETAL SYSTEM "</b>					
7.	General anatomy and development of gastrointestinal tract	2 h	-	3	1	4
8.	Peritoneum and its derivatives. Glands of gastrointestinal tract	2 h	-	3	1	4
9.	General anatomy and development of the respiratory system	2 h	-	3	1	4
10.	General anatomy and development of the urinary system	2 h	-	3	1	4
11.	General anatomy and development of male and female reproductive system	2 h	-	3	1	4
12.	General anatomy and development endocrine and immune system	2 h	-	3	1	4



### Calendar-thematic plan practical classes

No. week	Name topics	Quantity hours	Criteria for assessing the oral response			
			Great level of knowledge with creative approach To topic.	Good level of knowledge about the topic	Average level Knowledge about the topic	total
1-module						
1.	Introduction to Anatomy. Axis and plane. The Skeleton . Bones. The bones of the vertebral column and thorax. Introduction to syndesmology <a href="https://youtu.be/t6-ueqFK1IE?si=iQN2DRK9XHvmYUhw">https://youtu.be/t6-ueqFK1IE?si=iQN2DRK9XHvmYUhw</a>	2 h	4	3	2	4
2.	Bones of pectoral girdle and upper limb <a href="https://youtu.be/NHECopO6L3g?si=kPmEeW ayytDQ7WQa">https://youtu.be/NHECopO6L3g?si=kPmEeW ayytDQ7WQa</a>	2 h	4	3	2	4
3.	Bones of pelvic girdle and lower limb <a href="https://youtu.be/s7GcWBs6H6Y?si=7_Tq14A1B90TXGvf">https://youtu.be/s7GcWBs6H6Y?si=7_Tq14A1B90TXGvf</a>	2 h	4	3	2	4
4.	The fascial and cranial skull. <a href="https://youtu.be/ocqoZyY12GM?si=IJmT55fxGqib3PWO">https://youtu.be/ocqoZyY12GM?si=IJmT55fxGqib3PWO</a>	2 h	4	3	2	4
5.	Skull as a bone: Cranial fossa and its foramina. <a href="https://youtu.be/ocqoZyY12GM?si=IJmT55fxGqib3PWO">https://youtu.be/ocqoZyY12GM?si=IJmT55fxGqib3PWO</a>	2 h	4	3	2	4
6.	Muscles and fascia of head and neck. <a href="https://youtu.be/reqF1EORKSg?si=AJJ_Ey3FQxTrCOBL">https://youtu.be/reqF1EORKSg?si=AJJ_Ey3FQxTrCOBL</a>	2 h	4	3	2	4
7.	Muscles and fascia of back, thorax and abdomen. <a href="https://youtu.be/QisaWVtTC4E?si=9pkyKH6Z7VgWKO9t">https://youtu.be/QisaWVtTC4E?si=9pkyKH6Z7VgWKO9t</a>	2 h	4	3	2	4
8.	Muscles and fascia of upper limb. <a href="https://youtu.be/ToNk6jMEjuE?si=GTTcn8lliXt9-AIU">https://youtu.be/ToNk6jMEjuE?si=GTTcn8lliXt9-AIU</a>	2 h	4	3	2	4
9.	Muscles and fascia of pelvis and thigh <a href="https://youtu.be/q0WDD704P1M?si=77ysfR0ZUARxo2LD">https://youtu.be/q0WDD704P1M?si=77ysfR0ZUARxo2LD</a>	2 h	4	3	2	4
2-module SPLANCHNOLOGY						
10.	General anatomy of the digestive system. The structure of the mouth, palate, tongue. The structure of the pharynx, esophagus. <a href="https://youtu.be/yloTRGfcMqM?si=bdylGxricMtos-B5">https://youtu.be/yloTRGfcMqM?si=bdylGxricMtos-B5</a>	2 h	4	3	2	4

11.	The structure of the stomach, small and large intestine.	2 h	4	3	2	4
12.	The structure of the liver, gallbladder and pancreas. Spleen. Peritoneum and its derivatives. The topography of the organs of the digestive system in the abdominal cavity.	2 h	4	3	2	4
13.	The structure of the nasal cavity, paranasal sinuses and larynx. Anatomy and topography of the trachea. The structure and topography of the bronchi lungs. <a href="https://youtu.be/v_j-LD2YEgq?si=0DGvi6OZ-zjA_daV">https://youtu.be/v_j-LD2YEgq?si=0DGvi6OZ-zjA_daV</a>	3 h	4	3	2	4
14.	The structure of the kidneys, Formation of urine. The structure ureters, bladder, urethra <a href="https://youtu.be/AFoSkJObSO4?si=wWeelHv7Bun0SGIs">https://youtu.be/AFoSkJObSO4?si=wWeelHv7Bun0SGIs</a>	3 h	4	3	2	4
15.	Anatomy and topography of the male genital organs. The perineum <a href="https://youtu.be/_ce-IVjQYws?si=h8HA1dp88a5HcA1z">https://youtu.be/_ce-IVjQYws?si=h8HA1dp88a5HcA1z</a>	3 h	4	3	2	4
16.	Anatomy and topography of the male and female genital organs. <a href="https://youtu.be/_ce-IVjQYws?si=h8HA1dp88a5HcA1z">https://youtu.be/_ce-IVjQYws?si=h8HA1dp88a5HcA1z</a>	3 h	4	3	2	4
Total hours / average current score		36	1	2	1	4

#### 8. Individual Job students (SRS)

Schedule of self work on topics for the discipline human anatomy : for 1 semester

No.	Topics on SRSP	Task for the SRSP	Duration of an hour	The method for scoring	Literatures	The room is not	Completion date
1.	The joint of body trunk and skull	1. Discussion 2. Survey 3. testing	1 hour	1. Write an essay on the topic: 2. Create a presentation and report on the topic:	1. Padlet 2. Tarsia 3.RBL	Main and additional literature	08.09-18.09
2.	The joint of upper limb and lower limb	1. Discussion 2. Survey 3. solving a series of problems	1 hour	1. Draw a diagram of the rhomboid fossa and indicate the topography of the cranial nerve. 2.Demonstration on Visible body	1. Case method 2.sit tasks	Main and additional literature	19.09-29.09



3.	<b>The channels of temporal bone. The fontanel.</b>	1. Discussion 2. Survey 1. 3. solving a series of problems	1 hour	1. Create PPT 2. Demonstrations on dummies	1. Quiz 2. RBL	Main and additional literature	30.09-10.10
4.	<b>The triangle of neck. The weak places of abdomen. Spine and diaphragm.</b>	1. Discussion 2. Survey 1. 3. testing	1 hour	1. Write an essay on the topic: 2. Create a presentation and report on the topic:	1.3 D model 2. Microscopic examination of the skin structure	Main and additional literature	11.10-21.10
5.	<b>The muscles of the legs and feet.</b>	1. Discussion 2. Survey 1. 3. testing	1 hour	1. Write an essay on the topic: 2. Create a presentation and report on the topic:	1.3 D model 2. Microscopic examination of the skin structure	Main and additional literature	22.10-31.10
<b>No.</b>	<b>Topics on SRSP</b>	<b>Task for the SRSP</b>	<b>Duration of an hour</b>	<b>The method for scoring</b>	<b>Literatures</b>	<b>The room is not</b>	<b>Completion date</b>
1.	<b>Dentis Salivary glands</b>	1. Discussion 2. Survey 3. solving a series of problems	1 hour	1. Make a model on the topic 2. Create a report on the topic	1. Case method 2. sit tasks	Main and additional literature	10.11-20.11
2.	<b>The external nose, mediastinum, pleura</b>	1. Discussion 2. Survey 3. testing	1 hour	1. Create a presentation 2. report on the topic:	1. Tarsia 2. Word wall 3. RBL	Main and additional literature	21.11-30.11
3.	<b>The endocranial system</b>	1. Discussion 2. Survey 3. filling in the workbook	1 hour	1. Create a presentation 2. report on the topic:	1. Quiz 2. RBL 3. padlet	Main and additional literature	10.12-20.12
4.	<b>The immune system</b>	1. Discussion 2. Survey 3. testing	1 hour	1. Draw a diagram of the ref arc and indicate 2. Demonstration on Visible body	1. Word wall 2. RBL 3. padlet	Main and additional literature	21.12-30.12

## **9. Educational, methodological and informational materials**

### **Main literature:**



1. Chaurasia's BD HUMAN ANATOMY: Regional and Applied / Dissection and Clinical). Volume 1-4. – all editions ;
2. Chaurasia's BD HANDBOOK OF GENERAL ANATOMY . – all editions ;

#### Additional literature :

1. ATLAS OF HUMAN ANATOMY, Professional Edition, 7th Edition.
2. CLINICAL ANATOMY: Applied Anatomy for Students and Young Physicians, 14th edition.
3. GRAY'S ANATOMY for Students, 4th Edition.
4. HUMAN ANATOMY AND PHYSIOLOGY, 11th edition.
5. ANATOMY COLORING BOOK.
6. Sobotta . ATLAS OF HUMAN ANATOMY, 15th edition.
7. Kolesnikov L.L., Nikityuk D.B., Klochkova S.V., Stebnikova I.G. TEXTBOOK OF HUMAN ANATOMY. Vol. 1-3. – M.: GEOTAR - MEDIA , 2018. – 320 p.
8. Clinical neuroanatomy ; Vishram Sing
9. Clinical neuroanatomy ; Richard, Snell .
10. Dr. Rachel Koshy " Cunningham's Manual of Practical Anatomy"

#### Additional literature:

1. OSTEOLOGY (workbook). O.V.Kalmin., K.Sh.Sakibaev, K.Asanbek kyzy, etc. – Osh: 2019. – 112 p.
2. ARTHROLOGY (workbook). O.V.Kalmin., K.Sh.Sakibaev , A.M.Ergeshova, etc. – Osh, Penza: 2019. – 104 p.
3. MYOLOGY (workbook). O.V. Kalmin., K.Sh. Sakibaev, U.A. Ashimov, etc. - Osh, Penza: 2019. - 118 p.
4. SPLANCHNOLOGY (workbook). O.V.Kalmin., K.Sh.Sakibaev, K.Asanbek kyzy, etc. - Osh, Penza: 2019. - 142 p.
5. CRANIOLOGY (study guide) O.V.Kalmin., K.Sh.Sakibaev, A.Mergeshova et al. - Osh, Penza: 2019. - 108 p.

#### Software, electronic sources

- <http://anatomy-portal.info>
- <http://www.ksma.edu.kg/>
- <http://www.library.ru/>
- <http://www.medicalstudent.com>
- <http://www.medicinform.net>
- <http://www.mma.ru/>
- <http://www.rmj.ru>
- <http://www.rsmu.ru/>

### **1 0. SCORING INFORMATION (SCORE TABLE)**

4.5. Scale ratings academic academic performance:				
Letter grading system	Digital equivalent GPA points	Point system (rating)	Gradation	Characteristics of academic performance
A+	4.0	95 - 100		The student not only demonstrated knowledge of the material, but was also able to confidently apply it in practice situations. The

			<b>Great</b>	rating indicates a high level mastering the subject.
<b>A</b>	3.5	90 - 94		The student demonstrated deep knowledge and skills apply their on practice, very minor errors.
<b>B+</b>	3.0	85 - 89	<b>Very good</b>	Result higher average, But with some minor flaws. The student demonstrated good understanding key concepts.
<b>IN</b>	2.5	80 - 84		Good knowledge subject With small mistakes. The student has a confident command of the material
<b>C+</b>	2.0	75 - 79	<b>Fine</b>	The student has mastered the basic elements subject And can apply knowledge. This corresponds to sufficient level.
<b>WITH</b>	1.5	70 - 74		Knowledge of the material is at a sufficient level, although there are mistakes or shortcomings .
<b>D+</b>	1.0	65 - 69	<b>satisfactorily</b>	The level of knowledge is acceptable. Student completed minimum requirements
<b>D</b>	0.5	60 - 64		Level knowledge acceptable, but with noticeable shortcomings. Student completed minimum requirements
<b>FX</b>	0,0	30 - 59	<b>Not satisfactory</b>	Student Not took possession material in the required volume and did not meet the requirements. Necessary retake .
<b>F</b>	0,0	1- 29		The student did not achieve the minimum level of knowledge or skills required to pass a subject or exam. Necessary refresher course of study of the discipline
<b>W</b>	-	-		An assessment confirming the student's refusal to continue studying this subject.
<b>X</b>	-	-		A student may be suspended from studying a discipline for academic reasons by administrative order.

## 6. EVALUATION POLICY

No.	Audit lesson	Attendance	Test (For TC), oral, written th survey	Introduction to the Lecture Notebook	Total
1.	Lecture	-	3	1	4



No.	Classroom assignments	Attendance	test	Oral response	Total
1.	Practical lesson	-	1	3	4

No.	Out of Auditory Lesson	abstract	drawing	Latin terminology	Presentation Projects Research	Presentation Projects Research	Total
1.	S/Wt	1	1	1	3	2	8

## 12. COURSE POLICY

### 1. Attendance And participation V classes

Class attendance is mandatory. Students are expected to arrive to all classes on time, prepare for them by studying the required literature, express your own opinion, open, to show respect To the opinion of others.

### 2. Academic honesty and plagiarism

Academic honesty And integrity include V myself obligation do not participate V acts dishonesty: copying, plagiarism, issuance stranger works for one's own, using sources without citation, promoting academic dishonesty of other students, etc. More information on the principles of academic honesty can be found at the link:

<https://www.oshsu.kg/ru/page/9>

### 3. Deadlines And fines for lateness with submission of works

Deadlines for homework, projects, and other assignments are listed in the syllabus. And V Google Classroom . Violation deadlines without respectful reasons, entails receiving low current grades, failure to complete assignments - to not being allowed to take the exam.

### 4. Rules design works And links

Design written works should correspond requirements And teacher assignments posted in advance in Google Classroom .

### 7. Consultations And office watch teacher

Schedule consultations And watch reception teacher For individual consultations and reception of independent work, working off absences: according to the schedule

### 8. Behavior students

The classroom is a safe place to receive education regardless of race/ethnicity, religious beliefs, socio-economic status status And T. d. Intimidation And persecution are unacceptable. If If you notice bullying or harassment, report it to your instructor. Behavior that disrupts others' learning, such as talking to others while the instructor is teaching, other students doing assignments, or using a mobile phone to text, is not acceptable.

### 9. Order solutions problems

- ✓ Any question that arises in the process of studying the discipline must first be discuss With teacher. At impossibilities come To a solution that suits both parties, this issue can be discussed with the head of the program or department
- Topics The course of lectures covers problematic issues from the relevant sections of human anatomy.*

#### ✓ *Practical classes* include mastering:

- knowledge Latin ( Greek ) terminology ;
- knowledge of the sources and patterns of embryonic development, the structure of human organs and organ systems, clinical methods of their study (X-ray anatomical method, computed tomography, magnetic resonance imaging (MRI), ultrasound examination (US), endoscopy, etc.);
- dissection skills, demonstration of anatomical structures on natural preparations, dummies, and models;
- assessment of age, gender and individual characteristics of the structure of human organs;
- solving situational problems that have a clinical and anatomical basis.

#### ✓ *Independent (extracurricular) work* involves mastering the following skills:



- anthropometric ( macroscopic ) description organs ;
- demonstrate organs, their parts and other formations on preparations ;
- make diagrams and drawings based on the topic material;
- interpret visualized results of clinical examination methods (reading X-rays, tomograms, etc.)

✓ **Individual educational and research (UIRS) or scientific research (NIISR) work of students (optional) involves :**

- preparation of a review of scientific literature (abstract);
- preparation of illustrative material on the topic under consideration (multimedia presentation, set of tables, diagrams, drawings, etc.);
- production of educational and museum natural preparations and models ;
- conducting scientific research within the framework of the department's student scientific circle;
- participation in scientific state budget topics of the department;
- participation in the Olympics, etc.

**B)** Monitoring of the assimilation of the topic is carried out in practical classes in accordance with specific goals. It is recommended use next forms current control level preparations students :

- written (or computer) testing in the amount of tests;
- answering tickets and resolving situational problems;
- control of practical skills in the preparation and demonstration of anatomical preparations with subsequent analysis and assessment of the structural features of human organs;
- analysis of topographic and anatomical relationships of human organs and systems (knowledge of the basics of clinical anatomy);
- analysis of the sources and patterns of prenatal and early postnatal development of human organs, variations in organ variability and developmental defects.

The final assessment of the module's mastery is carried out upon its completion and includes:

- oral interview on natural anatomical preparations (testing practical skills).
- computer or written test control based on the volume of test tasks and situational tasks of the test paper (semantic modules);

### 13. LIST OF QUESTIONS AND TASKS ON TOPICS AND FORMS OF CONTROL

#### *Final control questions*

#### **I. About general theoretical questions. And the history of anatomy**

1. Anatomy subject. Research methods . Axes and planes. Conditional lines.
2. Individual variability. The concept of variants of the norm. Body types.
3. Human anatomy and age. Age periodization.
4. Anatomy in primitive society, in the ancient world, in the Middle Ages.
5. Anatomy of the Renaissance, in the 17th and 18th centuries.
6. Anatomy in the 19th century.
7. Anatomy in the 20th century.
8. Educational museum in human anatomy. History, meaning.
9. Study guides on human anatomy: atlases and textbooks. Creation stories.

#### **II. Anatomy of the musculoskeletal system (blood supply, innervation, lymphatic drainage)**

1. Bone as an organ. Classification of bones. Age characteristics.
2. Vertebrae. Connections between vertebrae. Atlanto-occipital joint.
3. The spinal column as a whole. From bending, biomechanics of movements.
4. Ribs and sternum. Connections between the ribs and the vertebrae and sternum.
5. The chest as a whole. Movement of the ribs.
6. Development of the skull in ontogenesis. Sutures and fontanelles. Variants and anomalies of the skull.
7. Bones of the brain skull. Temporal bone: its parts, holes, canals, their purpose.
8. Bones of the facial skull. The eye socket, the structure of its walls, openings , their purpose.
9. Skull as a whole. Vault (roof) of the skull; the bones that form it.
10. Temporal, infratemporal and pterygopalatine fossa: walls, openings and their purpose.

11. The nasal cavity, the structure of its walls. Paranasal sinuses, variants and anomalies.
12. The inner surface of the base of the skull (fossā). Holes and their purpose.
13. Outer surface of the base of the skull. Holes and them, on value.
14. Continuous and discontinuous connections. Classification.
15. Connections of the skull bones, types of sutures. Temporomandibular joint.
16. Bones and joints of the shoulder girdle. Biomechanics of movements.
17. Shoulder joint. Biomechanics of movements.
18. Connections of the bones of the forearm and hand. Biomechanics of movements.
19. Elbow joint, features of its structure. Biomechanics of movements.
20. Joints of the hand: structure, shape, movements.
21. Pelvic bones and their connections. Pelvis as a whole. Dimensions of the female pelvis.
22. Hip joint: structure, shape, movements.
23. Knee joint: structure, shape, movements.
24. Ankle joint: structure, shape, movements.
25. Bones of the leg and foot, their connections. Shpor and Lisfranc joints.
26. Muscle as an organ. Classification. Auxiliary apparatus of muscles.
27. Muscles and fascia of the back, their topography, structure, functions.
28. Muscles and fascia of the chest, their topography, structure, functions.
29. Anatomy of the abdominal muscles, their topography, functions. Weak spots.
30. Sheath of the rectus abdominis muscle. White line. Umbilical ring.
31. The inguinal canal, its walls and contents.
32. Diaphragm, its parts, topography, function. Weak spots.
33. Muscles and fascia of the neck, their topography, structure, functions.
34. Neck areas, their boundaries. Neck triangles, their practical significance.
35. Facial muscles, their topography, structure, functions.
36. Chewing muscles, structure and functions. Fascia of the masticatory muscles.
37. Muscles and fascia of the shoulder girdle: their structure, topography, functions.
38. Muscles and fascia of the shoulder: their anatomy, topography, functions.
39. Muscles and fascia of the forearm, their anatomy, topography, functions.
40. Muscles of the hand. Osteofibrous canals and synovial sheaths of the hand.
41. The axillary fossa, its walls, openings, their purpose. Radial nerve canal.
42. Anatomy of the gluteal region: muscle topography, their functions.
43. Holes and channels in the walls of the pelvis, their purpose.
44. Anterior muscles and fascia of the thigh. Muscular and vascular lacunae.
45. Femoral canal, its walls and rings (deep and subcutaneous).
46. Medial and posterior muscles and fascia of the thigh. Adductor channel.
47. Muscles and fascia of the leg. Their topography, functions.
48. Muscles of the foot: their topography, functions.

### III. Anatomy of internal organs

#### *Digestive system*

#### **(blood supply, innervation, lymphatic drainage)**

1. Digestive system. Development. Relationships between organs and the peritoneum.
2. Oral cavity: lips, vestibule of the mouth, hard and soft palate.
3. Milk and permanent teeth. Dentition, formula of milk and permanent teeth.
4. Language. Muscles of the tongue: skeletal, intrinsic. Papillae of the tongue.
5. Sublingual and submandibular salivary glands. Excretory ducts.
6. Parotid salivary gland. Excretory ducts.
7. The pharynx, its topography, structure.
8. Esophagus: topography, structure.
9. Stomach, structure, topography.
10. Duodenum: its parts, structure, topography.
11. Jejunum and ileum, structure, topography.
12. The large intestine, its sections, structure, topography, relationship to the abdomen.
13. Caecum: structure, topography of the appendix.
14. Rectum: topography, relationship to the peritoneum.
15. Liver: its development, structure, topography.
16. Gallbladder, its structure, topography. Excretory ducts.
17. Pancreas: structure, topography, water ducts.
18. Small seal. Omental, hepatic, pregastric bursae, their walls.
19. Big seal. "Pockets", lateral canals, mesenteric sinuses.



**Respiratory system**  
**(blood supply, innervation, lymphatic drainage)**

1. External nose. Nasal cavity (olfactory and respiratory areas).
2. Larynx: cartilages, their connection. Elastic cone of the larynx. Muscles of the larynx.
3. Trachea and bronchi. Their structure, topography.
4. Lungs: structure, topography. Roots and segmental structure of the lungs, acinus.
5. Pleura, its sections, boundaries; pleural cavity, pleural sinuses.
6. Mediastinum: sections, their topography; mediastinal organs.

**V. Genitourinary apparatus**  
**(blood supply, innervation, lymphatic drainage)**

1. Kidneys, their development, structure, topography. The structure of the nephron.
2. Anatomy of the urinary tract of the kidney: nephron, renal calyces, pelvis.
3. Ureters and bladder. Their structure, topography.
4. Male and female urethra: topography, sections, sphincters.
5. Testicle, epididymis. Testicular membranes.
6. Prostate gland, seminal vesicles. Bulbo-urethral glands.
7. The spermatic cord, its topography, components.
8. Male external genitalia, their structure.
9. Ovaries, their topography, structure, relationship to the peritoneum.
10. Ovarian appendages, their origin, topography, relationship to the peritoneum.
11. Uterus: parts, topography, ligaments, relationship to the peritoneum.
12. Fallopian tube: structure, topography, relation to the abdomen.
13. Vagina: structure, topography, relationship to the peritoneum.
14. Female external genitalia; their structure.
15. Muscles and fascia of the male and female perineum.
16. Anatomy of the peritoneum in the male and female pelvic cavity.

**VI. And the anatomy of the endocrine glands**  
**(blood supply, innervation, lymphatic drainage)**

1. Thyroid and parathyroid glands, their topography, structure.
2. Posterior pituitary gland, adrenal medulla and pineal gland.
3. Pituitary gland, its topography, structure.
4. Adrenal glands, their development, topography, structure.
5. The intrasecretory part of the pancreas, gonads, their topography.

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