



## CD 8.5.1 DISCIPLINE CURRICULUM

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**FACULTY OF STOMATOLOGY**  
**STUDY PROGRAM 0911.1 STOMATOLOGY**  
**DEPARTMENT OF HUMAN ANATOMY**

**APPROVED**

at the meeting of the Commission for Quality Assurance and Evaluation of the Curriculum Faculty of Stomatology

Minutes No. 3 of 13 09 2017

Chairman, PhD, associate professor

Stepco Elena   
(signature)

**APPROVED**

at the Council meeting of the Faculty of Stomatology

Minutes No. 6 of 20 07 2018

Dean of Faculty, PhD, professor

Ciobanu Sergiu   
(signature)



**APPROVED**

at the meeting of the Chair of Human Anatomy

Minutes No. 10 of 31.01.2018

Head of Chair, PhD, professor

Catereniuc Ilia   
(signature)

## SYLLABUS

### DISCIPLINE HUMAN ANATOMY

Integrated studies

Type of course: **Compulsory**

Chisinau, 2018



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### I. INTRODUCTION

- **General presentation of the discipline: place and role of the discipline in the formation of the specific competences of the professional / specialty training program**

Education in the field of training *0911 Dentistry* has the mission to train highly qualified, multilaterally developed specialists able to ensure the oral health of the population and to prevent dental diseases among the population.

Qualitative training of the specialist in Dentistry interferes with the fundamental disciplines (anatomy, histology, physiology, etc.), meant to provide basic knowledge necessary for the assimilation of the disciplines.

Human Anatomy is an important component of preclinical education and it is one of the oldest fundamental sciences of medical education, which can also be defined as science of the material substrate of the life and health.

Having as the object of research the living human body, Anatomy is an important component of preclinical education that supplies the student with information on the structure of the human body in phylogenesis and ontogenesis, the morphological variability of its structures, development anomalies, age, gender and individual specific features.

The human anatomy course studies the structure of the human body and its component parts at the macro- and mesoscopic levels, as well as their changes conditioned by interaction and interdependence with the other biological systems, which have influenced the formation of the *Homo sapiens* during evolution.

This information is useful for studying subsequent biomedical courses and is intended not only to form a set of basic knowledge about morphology of the human body, but also to facilitate the creation of genuine notions of the body as a whole, in which the structure is influenced by function and *vice versa*, in close connection with the environment.

- **Mission of the curriculum (aim) in professional training**

Aim of the curriculum consists in supplying students with knowledge about the structure of the human body, the morpho-functional specific features of organs and organ systems in different periods of postnatal development, focusing on the cephalic extremity of the body and their use for basic, clinical and profile disciplines aimed to prevent various diseases, to contribute in establishment of proper diagnosis and treatment.

One of the main objectives of the course is to study the anatomy of the living person and to understand its educational role in professional training.

- **Languages of the course:** Romanian, Russian, English.
- **Beneficiaries:** First year students, Faculty of Stomatology, specialty *DENTISTRY*.



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### II. MANAGEMENT OF THE DISCIPLINE

Code of the discipline		<b>F.01.O.001 – Human anatomy</b>	
Name of the discipline		<b>Human anatomy</b>	
Person(s) in charge of the discipline		PhD, professor <b>Ilia Catereniuc</b>	
Year	<b>I</b>	Semester	<b>I</b>
Total number of hours– <b>180</b>			
Lectures	<b>34</b>	Practical/laboratory hours	<b>34</b>
Seminars	<b>34</b>	Self-training	<b>78</b>
Form of assessment	<b>E</b>	Number of credits	<b>6</b>



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### III. TRAINING AIMS WITHIN THE DISCIPLINE

*At the end of the course the student will be able:*

*✓ at the level of knowledge and understanding to:*

- form clear and accurate ideas about the human anatomy, its evolution and branches, its role and place among the basic medical, clinical and profile disciplines;
- know traditional and modern methods of anatomical examination, including examination of a living person;
- acquire skills necessary for the practice of a dental specialist, oriented towards knowledge and understanding of the structure of the human body and of the physiological and pathological mechanisms of functioning of the organs and organ systems;
- possess and reproduce information about the human body as a whole and its constitutive elements (tissues, organs, organ systems, apparatuses);
- comprehend and reproduce general definitions about the norm, variants of norm, abnormalities and their applied significance;
- possess and reproduce information about the human body proportions, constitutional types, individual, age, and gender specific features of all anatomical formations and their applied significance in the field of dentistry;
- reproduce information on the general structural features of organ systems, the structure of organs at the macroscopic and mesoscopic levels, their function and appearance in a living person (somatoscopic, radiological, sonographic, MRI, endoscopic), especially with regard to cervico-oro-facial formations;
- know International Anatomical Terminology elaborated by FICAT (Federative International Committee on Anatomical Terminology, 1998) as well as anatomical and clinical terminology used in dentistry.

*✓ at the application level to:*

- apply the theoretical knowledge in practice and professional activity;
- identify anatomical formations and arrange them into anatomical position;
- demonstrate the structural aspects of the body regions on the dissected corpse, anatomical samples, molds, etc.;
- demonstrate the location and projection on the body surface of the main anatomical formations (viscera, blood vessels, nerves);
- know and determine the constitutional types of the human body;
- establish and palpate bony and muscular landmarks, joints, blood vessels and nerves of different body regions on a living person;
- possess basic skills of dissection and preparation of anatomical samples for studies.

*✓ at the integration level to:*

- evaluate the place and appreciate the importance of knowledge in the field of human anatomy in order to acquire basic, clinical dental profile disciplines;
- use information technologies to obtain, evaluate, store, produce, present and exchange information with colleagues in individual and group work;
- to acquire learning abilities, that will contribute to the management of the professional activity;
- become aware of the applicability of anatomical knowledge for work as a specialist in dentistry.



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### IV. PROVISIONAL TERMS AND CONDITIONS

Anatomy is a fundamental science in medical education, studying the human body and its ontogenetic development, which is closely related to the environmental changes and daily activities of each person.

For the successful comprehension of the discipline, thorough knowledge of biology and anatomy is required, obtained in pre-university studies, as well as knowledge of the principles of medical terms, based on elementary knowledge of the Latin language.

The discipline of human anatomy is oriented towards the formation of an initial level of knowledge necessary for further study of physiology, pathophysiology, morphopathology, pharmacology, clinical pharmacology, etc., with which it vertically integrates.

Due to the application of the methods used by physicians (palpation, percussion, radiological, endoscopic, computer tomography, ultrasound, etc.), anatomy becomes a science of living form, possessing a considerable vocabulary of over 5000 terms on which all the other sciences in medical education are based.

Modern medicine does not require from nowadays anatomy an abstract of human body structure and its shape, but real data about the structure of an individual - *individual anatomical variability*.

Therefore, Anatomy is the science of living forms, of changing and reorganization of the human body. It includes systematization and integration of knowledge about the mutual connection and influence of somatic and visceral systems, about the influence of various external environmental factors on musculoskeletal and visceral activity and on the nervous system.

***For a good comprehension of the discipline, the first year student needs the following skills:***

- good level of the language of instruction;
- confirmed competences in the sciences studied at lyceum (*biology, chemistry, physics*);
- knowledge of the principles of medical terms formation, based on elementary knowledge of the Latin language;
- digital competences (*use of the Internet, document processing, electronic tables and presentations, use of graphics programs*);
- ability to communicate and to work in a team;
- qualities - tolerance, compassion, creativity, initiative, autonomy.



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### V. THEMES AND ESTIMATE ALLOCATION OF HOURS

No	THEME	Number of hours		
		Lectures	Practical hours	Self-training
1.	<i>Anatomy as a fundamental discipline. Introduction into Human anatomy.</i> Elements of orientation of the human body. Methods of anatomical examination of a living person.	2	2	2
2.	<i>General Osteology.</i> Skeleton of the trunk. Bones of the upper and lower limbs, examination on a living person.	4	4	4
3.	<i>Arthroscopy - generalities, biomechanics.</i> Joints of the bones of the trunk. Vertebral column and thorax as a whole. Joints of the upper limb. Joints of the lower limb. Pelvis and foot as a whole. Examination on a living person.	2	6	3
4.	<i>General Myology.</i> Muscles, fasciae and topography of the trunk. Muscles, fasciae and topography of the upper limb. Muscles, fasciae and topography of the lower limb, examination on a living person. Functional anatomy of the trunk and limb muscles.	4	6	6
5.	<b>TEST. ASSESSMENT.</b>		2	
6.	<i>General Splanchnology. Functional anatomy of the Alimentary (Digestive) system.</i> Oesophagus and stomach, small and large intestine, segments, examination on a living person. Liver and pancreas, spleen. Peritoneum, examination on a living person.	2	8	12
7.	<i>Functional anatomy of the Respiratory system.</i> Trachea, bronchi, lungs. Pleura and mediastinum, heart. Examination on a living person.	2	4	6
8.	<i>Functional anatomy of the Urinary system.</i> Organs of the Urinary system. Examination on a living person.	2	2	4
9.	<i>Functional anatomy of the Genital systems.</i> Female genitalia. Male genitalia. Perineum. Examination on a living person.	2	4	4
10.	<i>Functional anatomy of the Endocrine glands.</i> Endocrine glands – classification, structure, functions. Examination on a living person.	2	2	4
11.	<i>Functional anatomy of the Lymphoid system.</i>	2	2	3
12.	<b>TEST. ASSESSMENT.</b>		2	
13.	<i>General notions about the central Nervous system. Reticular formation and limbic system. Functional anatomy of the spinal and cranial meninges. Cerebrospinal fluid.</i> Spinal cord – internal features, gray and white substances, spinal nerve formation, reflex arch. Spinal meninges. Brain – generalities. Rhombencephalon, mesencephalon. Rhomboid fossa. Fourth ventricle. Diencephalon, third ventricle. Basal nuclei, lateral ventricles. Cerebral hemispheres, relief, functional centers. The white substance of the hemispheres. Conductive pathways (pyramidal tract, touch and pain sensibilities). Cranial meninges.	4	8	10
14.	<i>Functional anatomy of the Autonomic (Vegetative) nervous system. Peculiarities of innervation and vasculature of the viscera and somatic formations.</i> Autonomic (vegetative) nervous system – general notions, differences from the somatic one, the vegetative reflex arch. Sympathetic, parasympathetic and metasympathetic parts of the autonomic (vegetative) nervous system, central and peripheral formations. Vegetative plexuses.	4	4	5
15.	<i>Functional anatomy of the Cardiovascular system.</i> Heart and pericardium. Blood vessels and nerves of the heart. Blood vessels of the upper and lower limb. Blood vessels of the walls and organs of body cavities (thoracic, abdominal, pelvic). Caval vein systems and portal vein.	2	4	5
16.	Spinal thoracic nerves. Brachial plexus. Lumbar plexus. Sacral plexus.		4	6
17.	<i>Specific features of vasculature and innervation of parenchymal and cavitory organs.</i>		2	4
18.	<b>TEST. ASSESSMENT.</b>		2	
<b>Total</b>		<b>34</b>	<b>34/34</b>	<b>78</b>
<b>TOTAL</b>		<b>180</b>		



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### VI. REFERENCE OBJECTIVES AND CONTENT UNITS

Objectives	Content units
<b>Chapter 1. LOCOMOTOR APPARATUS</b>	
<ul style="list-style-type: none"><li>● <b>to define</b> the basic concepts of anatomy;</li><li>● <b>to know:</b><ul style="list-style-type: none"><li>✓ anatomical research methods and anatomical terminology;</li><li>✓ classification, structure and specific features of the bones, joints and muscles;</li><li>✓ the axes around which movements are performed and the movements produced in the joints in muscular contraction;</li><li>✓ bony, articular and muscular landmarks;</li></ul></li><li>● <b>to demonstrate:</b><ul style="list-style-type: none"><li>✓ abilities for analysis and systematization of knowledge;</li><li>✓ bony, articular and muscular landmarks on cadaveric material, radiographs and on a living person;</li></ul></li><li>● <b>to apply</b> the criteria for differentiation of the anatomical formations on the cadaver and parts of the body, radiograms and on a living person by:<ul style="list-style-type: none"><li>✓ identification of the human body planes, axes and orientation lines;</li><li>✓ identification of individual and regional specific features;</li><li>✓ palpation of the bones, joints, muscles;</li></ul></li><li>● <b>to integrate</b> gained knowledge and apply it in practice.</li></ul>	<ol style="list-style-type: none"><li>1. <i>Anatomical terminology.</i></li><li>2. <i>Anatomical landmarks of the human body.</i></li><li>3. <i>General Osteology.</i> The regional features of human skeleton: trunk, upper and lower limbs.</li><li>4. <i>General Arthrology.</i> Joints of the trunk and limbs.</li><li>5. <i>General Myology.</i> Muscles and topography of body regions. Trunk muscles: muscles of the back, thorax and abdomen; muscles of the limbs and girdles.</li></ol>
<b>Chapter 2. INTERNAL ORGANS</b> <i>[alimentary (or digestive), respiratory, urinary and genital systems]</i>	
<ul style="list-style-type: none"><li>● <b>to define the:</b><ul style="list-style-type: none"><li>✓ notions of organ, organ system and apparatus;</li><li>✓ notions about tubular and parenchymal organs</li><li>✓ notion of alimentary (digestive) system;</li><li>✓ notion of respiratory system;</li><li>✓ notion of urinary system;</li><li>✓ notion of genital system;</li></ul></li><li>● <b>to know:</b><ul style="list-style-type: none"><li>✓ anatomical terminology and principles of classification, structure and topography of internal organs;</li><li>✓ individual and regional features of the organs of the alimentary (or digestive), respiratory, urinary and genital systems;</li></ul></li><li>● <b>to demonstrate:</b><ul style="list-style-type: none"><li>✓ anatomical formations on cadavers, molds, radiograms and on a living person;</li><li>✓ ability to identify the topographical landmarks necessary to determine the boundaries and projection of the internal organs;</li></ul></li><li>● <b>to apply</b> the criteria for differentiating the anatomical formations</li></ul>	<ol style="list-style-type: none"><li>1. <i>General considerations</i> regarding the structure, classification and topography of internal organs.</li><li>2. <i>Alimentary (digestive) system – generalities:</i> oesophagus, stomach; intestine (small and large); liver and pancreas. Abdominal regions, abdominal and peritoneal cavities. Peritoneum and extraperitoneal spaces.</li><li>3. <i>Respiratory system – generalities:</i> trachea, main bronchi, lungs and pleura. Thyroid, parathyroid glands and thymus. Mediastinum.</li><li>4. <i>Urinary organs:</i> kidneys, ureters, urinary bladder.</li></ol>



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### Objectives

on anatomical samples, cadavers, radiographs and on a living person.

- **to integrate** anatomical knowledge with clinical disciplines by: drawing conclusions on the studied subject; developing of own opinions about the individual, age and gender anatomical features of the organs.

### Content units

- Suprarenal glands and paraganglia.
5. *Male genitalia*. Male urethra.
  6. *Female genitalia* and female urethra.
  7. *Perineum*.

### Chapter 3.

#### SOMATIC NERVOUS SYSTEM (*central and peripheral*). SENSE ORGANS

- **to define:** central nervous system (CNS) notions;
  - ✓ derivatives of the primary and secondary cerebral vesicles;
  - ✓ notions of CNS variants and anomalies;
  - ✓ notions of spinal nerve, somatic plexus;
  - ✓ notions of cranial nerve and sensory system;
  - ✓ notions of conductive pathway;
- **to know:**
  - ✓ anatomical terminology and principles of classification, structure and topography of CNS components, spinal and cranial nerves;
  - ✓ peculiarities of somatic plexuses formation;
- **to demonstrate:**
  - ✓ anatomical formations of the central and peripheral nervous systems on anatomical samples, molds, radiographs;
  - ✓ ability to identify the topographical landmarks required to determine the projection of the nerves;
- **to apply** the criteria for differentiation of anatomical formations on the anatomical samples, cadavers and living person;
- **to integrate** anatomical knowledge with clinical disciplines by:
  - ✓ drawing conclusions on the studied subject;
  - ✓ developing of own opinions about the individual, age and gender anatomical features of the central and peripheral parts of the nervous system.

1. Spinal cord.
2. Spinal meninges.
3. Brainstem. Fourth ventricle.
4. Diencephalon. Third ventricle.
5. Cerebral hemispheres. Localization of functions in the cerebral cortex. Limbic system.
6. White substance of the hemispheres. Basal nuclei. Lateral ventricles.
7. Cranial meninges and cerebrospinal fluid.
8. Conductive pathways of the central nervous system.
9. Spinal nerves, their ramifications.
10. Cervical plexus.
11. Brachial plexus.
12. Thoracic spinal nerves.
13. Lumbar plexus.
14. Sacral plexus.
15. Cranial nerves: real and apparent origin, types of fibers, distribution areas.
16. Sensory system.

### Chapter 4.

#### AUTONOMIC (VEGETATIVE) NERVOUS SYSTEM

- **to define:**
  - ✓ Autonomic (vegetative) nervous system and its component parts;
- **to know:**
  - ✓ anatomical terminology and principles of classification, structure and topography of VNS components;
- **to demonstrate:**
  - ✓ components of VNS on the cadaveric material, molds, radiograms with the transfer of knowledge on a living person;
- **to apply** the criteria of differentiation of anatomical formations on the anatomical samples and corpse.

*VNS – central and peripheral components.*  
*Sympathetic nervous system:*  
 ✓ Sympathetic chain.  
*Parasympathetic nervous system*  
 ✓ Vegetative plexuses, components, main ramifications.  
*Metasympathetic nervous system.*





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### Objectives

### Content units

- **to integrate** anatomical knowledge with clinical disciplines by:
  - ✓ drawing conclusions on the studied subject;
  - ✓ developing of own opinions about the individual, age and gender anatomical features of the VNS.

### Chapter 5. CARDIOVASCULAR AND LYMPHOID SYSTEMS

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• <b>to define:</b><ul style="list-style-type: none"><li>✓ Cardiovascular system;</li><li>✓ systemic and pulmonary blood circulations;</li><li>✓ notions of arterial anastomoses;</li><li>✓ notions of cavo-caval and portocaval anastomoses;</li></ul></li><li>• <b>to know:</b><ul style="list-style-type: none"><li>✓ principles of classification of blood vessels;</li><li>✓ particularities of vasculature of internal organs;</li></ul></li><li>• <b>to demonstrate:</b><ul style="list-style-type: none"><li>✓ anatomical formations on cadavers, molds and on a living person;</li><li>✓ ability to determine the projection of blood vessels;</li></ul></li><li>• <b>to apply</b> criteria for differentiation of anatomical formations on anatomical samples, corpse and radiograms;</li><li>• <b>to integrate</b> anatomical knowledge with clinical disciplines by:<ul style="list-style-type: none"><li>✓ drawing conclusions on the studied subject;</li><li>✓ developing own opinions on the studied subject.</li></ul></li></ul> | <ol style="list-style-type: none"><li>1. <i>Heart and pericardium.</i></li><li>2. <i>Regional lymph nodes.</i></li><li>3. <i>Vasculature and lymph drainage of the organs and walls of the abdominal cavity.</i></li><li>4. <i>Blood vessels and lymphatics of the upper limb.</i></li><li>5. <i>Vasculature and lymph drainage of the joints and muscles of the lower limb.</i></li></ol> |
|---|--|



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### **VII. PROFESSIONAL (SPECIFIC (SC) AND TRANSVERSAL (TC)) COMPETENCES AND STUDY OUTCOMES**

#### **PROFESSIONAL COMPETENCES (specific) (SC)**

- PC1. Knowledge, understanding and use of anatomical language;
- PC2. Knowledge of the features of the structure, development and functioning of the human body;
- PC3. Knowledge of the organization of the locomotor apparatus, of the systems of organs, vascular and nervous systems;
- PC4. Knowledge and identification of anatomical formations on anatomical samples, molds and on a living person and the ability to describe and determine the projection of internal organs towards the bony and muscular landmarks;
- PC5. Practical application of anatomical knowledge;
- PC6. Performing of various practical exercises and procedures for carrying out specific professional activities based on anatomical knowledge and other fundamental disciplines.

#### **TRANSVERSAL COMPETENCES (TC)**

- TC1. Fitting in interdisciplinary projects, extracurricular activities;
- TC2. Performing activities and exercising the specific role for studying the discipline in a team. Promoting the spirit of initiative, dialogue, cooperation, positive attitude and respect for colleagues, empathy, altruism and continuous improvement of one`s activities;
- TC3. Developing different learning techniques.

#### **STUDY OUTCOMES**

*Upon completion of the course the student will be able to:*

- have knowledge about structure, topography and anatomical features of the organs and organ systems;
- understand the principles of application and transfer of knowledge in medical practice;
- apply on a living person the theoretical knowledge regarding determination of limits and projection of the organs to anatomical landmarks;
- evaluate the place and role of human anatomy in the preclinical preparation of the medical student;
- implement the gained knowledge in the research activity;
- possess skills of analysis and synthesis of information and to be able to use the acquired knowledge and Information Technologies.



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### VIII. STUDENT'S SELF-TRAINING

#### *Suggestions for individual activity*

The passive listening of the course is one of the less efficient methods of learning, even when it is well structured and illustrated. That is why in order to memorize the material many teaching methods related to the delivered material are required.

The practical work is more efficient than reading of how to do it, but even more effective is to teach someone else to do so.

Students who desire to succeed in the course of *Human Anatomy* need to work insistently and actively with the demonstrative material.

*Considering the learning methodology, the department would suggest the students some tips to be followed:*

1. Initially, you need to make acquaintance with the topic and subjects you need to answer.
2. Read attentively the text from the textbook, take notes! Try to formulate yourselves the main ideas. Apply gained knowledge for demonstration on anatomical samples.
3. Come to lectures not only for the sake of being present! If you do so, you will not be able to meet all the requirements. At lectures take notes attentively asking yourselves if you understand the explained material, rating your level of knowledge. Use course materials!
4. Mind the following: teachers are more than happy when you ask questions. This means that you try to understand and process the studied material.
5. For a more progressive comprehension of the lecture, you are advised to organize yourselves into 2-3 students for regular meetings in order to discuss the theme which was studied at the lesson preparing yourselves for the tests and exams. As a rule, the material is memorized easier in groups, than when you work on your own. In addition, the ability to explain to colleagues the appropriated material will develop memory and speech, useful things for the future.
6. The course of Human Anatomy expects a lot from you. It comprises around 5000 terms, the majority of them are new and need to be memorized. These requirements involve a rational time usage, so, it will be necessary to handle time so as to find the balance between the effort given for an appropriate knowledge feedback and your private life. Depth of the subject knowledge requires each working hour of direct contact with the teacher to be supplemented with at least 1-2 hours of individual student's work. For a successful comprehension of the course in Human Anatomy, you need to work individually around 8-10 hours per week.

For that purpose, you should use the *Anatomical Study Hall* of the Department of Human Anatomy.



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No	Expected product	Implementation strategies	Assessment criteria	Implementation terms
1.	Working with bibliographic sources and information resources	Work systematically in the library and media. Explore current electronic sources on the subject.	1. Logical thinking, flexibility. 2. The quality of the systematization of the informational material obtained through its own activity.	During semester.
2.	Preparing the report	Analysis of relevant sources on the topic of the paper. Analysis, systematization and synthesis of information on the proposed topic. Compilation of the report in accordance with the requirements in force and presentation to the chair.	1. The quality of systematization and analysis of the informational material obtained through its own activity. 2. Concordance of information with the proposed theme.	During semester.
3.	Work with anatomical samples and cadaveric material in the demonstration room (over program)	The student will benefit of the self-training program after hours. If required, he can contact the professor on duty. Interaction conditions are created with both group colleagues and other students from all faculties. The student is able to work with anatomical samples himself or in a team.	1. Workload. 2. Ability to demonstrate anatomical formations on samples. 3. Formulating conclusions on applied significance of the anatomical formations.	During semester.



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### IX. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-ASSESSMENT

#### • *Teaching and learning methods used*

##### • *Teaching methods used:*

1. The *Human Anatomy* discipline is delivered according to the classical methodology with lectures and practical classes.
2. The theoretical course is delivered in the lectures held by the course holders. An interactive lecture is practiced.
3. Also, the following methods are used:
  - ✓ explanation;
  - ✓ demonstration;
  - ✓ heuristic conversation and debate;
  - ✓ group work;
  - ✓ individual work;
  - ✓ working with manual, scientific text and the anatomy atlas;
  - ✓ solving the case based problems;
  - ✓ interactive listening.

#### • *Applied teaching strategies/technologies (specific to the discipline)*

In practical work, together with the teacher of the group, students study on the anatomical samples, use planes, molds, tables, fill-in the workbooks, do preparation of anatomical samples, that would be further demonstrated to the colleagues.

#### • *Methods of assessment (including the method of final mark calculation)*

**Current:** frontal/individual assessment of knowledge by:

- ✓ written assessments;
- ✓ demonstration of anatomical structures included in the curriculum of the discipline on the anatomical samples;
- ✓ solving the docimological tests in University Informational Management System (UIMS) – SIMU;
- ✓ graphical representation of the schemes on certain subjects;
- ✓ solving the case based problems.

#### **Final assessment** - exam.

At Human Anatomy discipline are organized 6 assessments (formative evaluation) and assessment of practical skills during the semester of study as follows:

**Assessment no. 1-** Locomotor apparatus (oral evaluation / practical skills + testing).

**Assessment no. 2 –** Splanchnology and Endocrine glands (oral evaluation / practical skills + testing).

**Assessment no. 3 -** Central Nervous system. Spinal nerves. The Autonomic (vegetative) nervous system. Cardiovascular and Lymphoid systems (oral evaluation /practical skills).

#### **Assessment of practical skills.**

Each test is graded separately with marks from 0 to 10.

The average per semester is formed of the sum of the points accumulated at semestrial assessments divided into 7 (2 marks for each assessment and 1 for the assessment of practical skills).



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Each assessment includes the evaluation of the knowledge gained in the practical work and the theoretical course on a particular study chapter and consists of demonstration and annotation of the anatomical samples, including the assessment of the practical skills.

Only students who have received the semester mark 5.0 and more and recovered all the absences of the practical lessons are admitted to Human Anatomy exam.

The assessment of practical skills consists of demonstrating by the respondents of anatomical formations studied in the practical lessons. Practical skills assessment is carried out with examination cards that include 10 questions.

Demonstration or description by the respondents of anatomical samples begins immediately after he/she has chosen the test, without being given any time for preparation. In order to reflect the answers to the control questions, the examiner receives a special card stating the number of points obtained for each answer as well as the total number of points.

Examination of Human Anatomy discipline consists of testing in the UIMS – *SIMU*.

**The overall score** is based on two components: **the half-yearly average score** with the coefficient 0.5 and the **UIMS – *SIMU* test** with the coefficient of 0.5.

Assessment of knowledge is graded from 10 to 1.0 (with decimals).

### Scale of mark rounding at different assessment stages

Intermediate marks scale (annual average, marks from the examination)	National Assessment System	ECTS Equivalent
1,00-3,00	2	F
3,01-4,99	4	FX
5,00	5	E
5,01-5,50	5,5	
5,51-6,0	6	
6,01-6,50	6,5	D
6,51-7,00	7	
7,01-7,50	7,5	C
7,51-8,00	8	
8,01-8,50	8,5	B
8,51-8,00	9	
9,01-9,50	9,5	A
9,51-10,0	10	

The average annual mark and the marks of all stages of final examination (computer test, oral) – are expressed in numbers according to the mark scale (according to the table), and the final mark obtained is expressed in number with two decimals, which is transferred to student's record-book.

*Absence on examination without a reason is recorded as "absent" and is equivalent to 0 (zero). The student has the right to have two re-examinations.*



## CD 8.5.1 DISCIPLINE CURRICULUM

Edition: 06

Date: 20.09.2017

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### X. RECOMMENDED LITERATURE:

#### A. Compulsory:

1. PRIVES M., LYSENKOV N., BUSHKOVICH V. Human Anatomy, vol. I. /The weight-bearing or locomotor apparatus. The science of the viscera. / Translated from Russian by Ludmila Aksenova. 1985. Mir Publishers, Moscow, 1989.
2. PRIVES M., LYSENKOV N., BUSHKOVICH V. Human Anatomy, vol. II. /The science of the vessels. The science of the nervous system. The science of the sense organs. / Translated from Russian by Ludmila Aksenova. 1985. Mir Publishers, Moscow, 1989.
3. GLOBA L. Human Anatomy. Angiology, Peripheral Nervous System and Sense Organs. Chişinău, 2012.
4. НАЦИНА Т. Guide in anatomy: Locomotor apparatus, Chişinău, 2013.
5. SINELNICOV R.D., SINELNICOV IA. R. Atlas of human anatomy, v. I, II, III, IV, M. 1990.
6. CATERENIUC I., LUPASCU T., BABUCI A. et al. Culegere de scheme la anatomia omului / Сборник схем по анатомии человека / Collection of schemes for human anatomy. Chişinău, 2012, 2014.
7. LUPAŞCU T., CATERENIUC I., GLOBA L. Lucrări practice la Anatomia Omului / *Notebook for Practical work at Human Anatomy* / Практические занятия по анатомии человека (Ghid pentru autoinstruire / *Guide for self-studying* / Пособие по самоподготовке). Ed. a VIII-a trilingvă (revăzută și completată). III. Sistemele cardiovascular, limfatic, nervos periferic și organele senzoriale. III. *The cardiovascular, lymphoid and nervous systems and sense organs. III. Сердечно-сосудистая, лимфатическая, периферическая нервная системы и органы чувств.* Chişinău, 2017.
8. LUPAŞCU T., CATERENIUC I., GLOBA L., BATÂR D., BABUCI A., BENDELIC A. Lucrări practice la Anatomia Omului / *Notebook for Practical work at Human Anatomy* / Практические занятия по анатомии человека (Ghid pentru autoinstruire / *Guide for self-studying* / Пособие по самоподготовке). Ed. a IX-a trilingvă (revăzută și completată). II. Sistemul Nervos Central. Sistemele cardiovascular, limfatic, nervos periferic și organele senzoriale. / II. *Central Nervous System. The cardiovascular, lymphoid and nervous systems and sense organs.* / II. Центральная нервная система. Сердечно-сосудистая, лимфатическая, периферическая нервная системы и органы чувств. Chişinău, 2018.

#### B. Additional:

1. KEITH L. MOORE, ARTUR F. DALLEY, ANNE M.R. AGUR. Clinically Oriented Anatomy, 6-th ed., 2007.
2. DRAKE R. L., VOGL W., MITCHELL A. W. M. et al. Gray`s Atlas of Anatomy. Elsevier, 2008.
3. DRAKE R. L., VOGL W., MITCHELL A. W. M. Gray`s Anatomy for students. Philadelphia... Toronto, 2005.
4. GRAY`S Anatomy, 39<sup>th</sup> ed. Edinburgh... Toronto, 2005 / 40<sup>th</sup> ed. Edinburgh... Elsevier Limited, 2008.
5. KAHLE W., FROTSCHER M. Color Atlas of Human Anatomy, vol. III, Nervous System and Sensory Organs. Stuttgart-New York, 2003.
6. LEONHARDT H. Color Atlas of Human Anatomy. Vol. I-III. Stuttgart-New York, 2003.
7. MOORE K. L., DALLEY A. F. Clinical oriented Anatomy. Philadelphia... Tokyo, 2006.
8. NETTER FRANK H. Atlas of Human Anatomy. 4-th Edition, Elsevier, 2006.