MINISTRY OF HEALTH OF UKRAINE ODESSA NATIONAL MEDICAL UNIVERSITY Faculty of Dentistry Department of Human Anatomy

SYLLABUS of the discipline

"Human Anatomy"

Scope of the discipline	Total number of hours per discipli	ne:	
Scope of the discipline	180 hours, 6 credits.		
	Semesters: I, II, 1 year of study.		
Dava time place of the		00	
Days, time, place of the	According to the schedule of classes.		
discipline	Department of Human Anatomy.		
	Odesa, Valikhovsky Lane 3, classes are held in the 1st		
	and 2nd anatomical halls, as well as in the classrooms of		
	the department. Lectures will be held in large and small		
	anatomical classrooms. With distance learning on the		
	Teams platform		
Teacher(s)	1. Appelhans Elena. <i>Head of the Department, Doctor</i>		
	of Medical Sciences, Professor.		
	2. Neskoromna Nataliia . Ph.D, Associate Professor.		
	3. Prus Ruslan. Ph.D, Associate Professor.		
	4. Antsut Olga, Senior Teacher, Head teacher of the		
	department.		
	5. Antonova Natalya. Senior Teacher, Head of the		
	Museum of Human Anatomy.		
	6. Kozhukharenko Tetyana . <i>Senior Teacher</i> .		
	7. Kuznetsova Elena. <i>Senior Teacher</i> .		
	8. Matyushenko Philip. <i>Senior Teacher</i> .		
	9. Chebotareva Svitlana . <i>Senior Teacher</i> .		
	10. Ursu Oleksandr. Senior Teacher.		
	11. Prus Inna. Assistant.		
	12. Ostapenko Andriy. Assistant.		
Contact Information	1. Appelhans O. L.	0674842052	
	2. Neskoromna N.V.	0936082720	
	3. Prus R.V.	0680013117	
	4. Antsut O.A.	0504561236	
	5. Antonova N.A.	0633547515	
	6. Kozhukharenko T.I.	0632878972	
	7. Kuznetsova O.A.	0632979525	
	8. Matyushenko P. M.	0672999553	
	9. Chebotareva S. O.	0674838985	
	10. Ursu O.Y.	0971677773	

11. Prus I.V.	0633422433
12. Ostapenko A. O.	0996438030
	1 1
E-mail <u>anatomy@onmed</u>	<u>au.edu.ua</u>
Consultations are held by the tea	acher on duty according
to the duty schedule; Tuesday, T	Thursday - 14.30 - 17.30.
(For the period of wartime - on-	line Teams from 14.30 -
16.30 group "Working out - hur	nan anatomy and clinical
anatomy")	

COMMUNICATION

It is carried out using the department's E-mail: <u>anatomy@onmedu.edu.ua</u>, Teams chat, as well as using Viber and Telegram messengers.

ANNOTATION OF THE DISCIPLINE

*The subject of study of the discipline "*Human Anatomy" is the science of the form, structure, origin and development of organs, systems and the human body as a whole.

Prerequisites: based on the study of medical biology, histology, cytology and embryology, biophysics, Latin, ethics, philosophy, ecology and integrated with these disciplines;

Postrequisites: lays the foundations for the study of normal and pathological physiology, pathological anatomy, operative surgery and topographic anatomy, deontology, propaedeutics of clinical disciplines and the formation of skills to apply knowledge of human anatomy in the process of further study of all clinical disciplines and in future professional activities.

The purpose of the discipline: involves the acquisition of knowledge of anatomy in the world of natural science ideas about the structure and functions of the human body as a whole, the ability to use the acquired knowledge in the further study of other fundamental sciences of medicine, and in the practical activities of a doctor.

Objectives of the discipline: there is a systematic approach to the description of the form, structure of organs in unity with the functions performed:

To know:

a) the form and structure of organs integrated into systems;

b) the placement of organs, blood vessels, nerves in different parts of the body, which is of great importance for surgery;

c) aspects of anatomical features of individual human development at different stages of ontogeny;

d) patterns of prenatal and early postnatal development of human organs. *Be able to:*

- demonstrate and describe the anatomical structure of human organs and organ systems;

- determine parts, surfaces, edges, corners of organs and formations on them on anatomical specimens;

- assess the impact of social conditions and work on the development and

structure of the human body;

- apply Latin anatomical terms and their Ukrainian equivalents in accordance with the requirements of international anatomical nomenclature;

- analyze the results of laboratory and instrumental methods of studying the organs and systems of the human body.

Expected results:

To know:

- the form and structure of organs combined into systems:

- the shape and structure of bones (Osteologia);

- joints of bones (Arthrologia);

- muscles (Myologia);

- viscera (Splanchnologia);

- central and peripheral nervous system (including the autonomic division of the peripheral nervous system (Neurologia);

- endocrine glands (Glandulae endocrinae);

- lymphoid system (Systema lymphoideum);

- sensory organs (Organa sensoria);

- cardiovascular system (Systema cardiovasculare);

Be able to:

- demonstrate and describe the anatomical structure of human organs and organ systems;

- determine the anatomical relationships of human organs and organ systems (organ topography) on anatomical specimens;

- be able to assess the impact of social conditions and work on the development and structure of the human body;

- be able to apply Latin anatomical terms and their Ukrainian equivalents in accordance with the requirements of international anatomical nomenclature (São Paulo, 1997; Kyiv, 2001);

DESCRIPTION OF THE DISCIPLINE

Forms and methods of teaching.

The course will be taught in the form of lectures (34 hours) and practical classes (86 hours), organization of independent work of applicants (60 hours).

Teaching methods include storytelling, conversation, explanation, testing, independent work with anatomical preparations, simulation training on electronic "Anatomage", participation in the restoration of anatomical specimens, filling out the "Self-study notebook" in the discipline.

The content of the discipline

Content module 1. Anatomy of the bones of the skeleton.

Topic 1. Acquaintance with the department. Duties and rights of applicants.

International Anatomical Nomenclature. Axes and planes of the human body, their practical significance. Bone structure and formation.

Topic 2. Structure of the vertebrae. Spinal column. Sternum. Ribs.

Topic 3. Scapula and clavicle. Humerus. Bones of the forearm and hand.

Topic 4. Hip and femur. Lower limb and foot bones.

Topic 5. General information about the skull. Frontal, parietal and occipital bones.

Topic 6. Sphenoid bone. Ethmoid bone. Temporal bone, canals.

Topic 7. Bones of the facial skull. Nasal cavity. Orbital cavity. Palate.

Topic 8. The skull as a whole. Outer and inner surfaces. 12 pairs of h/m nerves – exit points. Temporal, infratemporal and pterygopalatine fossa.

Topic 9. Description of anatomical specimens from skeletal bones.

Content module 2. *Bone junction and myology*

Topic 10. Overview of bone connections. Connection of the vertebrae to each other. Junction of the ribs with the vertebrae and the sternum.

Topic 11. The connection of the bones of the skull to each other and the 1st, 2nd cervical vertebra. Temporomandibular joint.

Topic 12. Connection of the scapula and clavicle. Shoulder joint. Elbow joint. Connection of the bones of the forearm and hand.

Topic 13. Connection of the pelvic bones. The pelvis as a whole. Hip joint. Knee joint. Connection of the bones of the lower leg and foot.

Topic 14. General myology. Muscles and fascia of the back.

Topic 15. Facial muscles. Masticatory muscles. Mechanism of the act of chewing. Fascia of the head, interfascial spaces. Fascia and neck muscles. Topography: neck triangles.

Topic 16. Chest muscles, fascia, and triangles. Diaphragm. Muscles, fascia, abdominal lines. Areas, inguinal canal.

Topic 17. Muscles, fascia, and topography of the shoulder girdle and shoulder. Muscles, fascia, and topography of the forearm and hand.

Topic 18. Muscles, fascia, and topography of the pelvis, perineum, thigh.

Muscles, fascia, and topography of the lower limb and foot.

Topic 19. Description of anatomical preparations for topics in arthrosyndesmology and myology.

Content module 3. Splanchnology

Topic 20. Oral cavity. Lips, cheeks, palate, tongue. Glands of the oral cavity.

Tongue: structure, function, muscles. Pharynx. Pyrogov's lymphatic ring.

Topic 21. Teeth: formula, structure, bite, change of teeth.

Topic 22. Anatomy of the digestive system: esophagus, stomach, small intestine, colon, liver, pancreas. Peritoneum.

Topic 23. External nose. Nasal cavity. Paranasal sinuses. Larynx: muscles, junctions, laryngeal cavities. Trachea, bronchi, lungs. Pleura. Mediastinum.

Topic 24. Kidneys: topography, structure, function. Ureters. Bladder. Urethra.

Organs of the immune and endocrine systems.

Topic 25. Male genitals. Female genitals.

Topic 26. Description of anatomical preparations for topics in splanchnology.

Content module 4. Nervous system and sensory organs.

Topic 27. General information about the nervous system, phylo- and ontogeny of the central nervous system. Anatomy of the spinal cord. Medulla oblongata. Pons. Cerebellum. Isthmus of the rhomboid brain. Fourth ventricle. Rhomboid fossa. Topography of the nuclei of the nerves.

Topic 28. Midbrain. Diencephalon. Third ventricle.

Topic 29. Telencephalon. Relief of the cerebral cortex. Localization of functions. Basal ganglia. Lateral ventricles. Ascending conductive pathways. Descending conductive pathways.

Topic 30. Olfactory brain. White matter of the hemispheres. Exit points of 12 pairs of h/m nerves. Meninges. Venous sinuses of the dura mater. Blood vessels and nerves of the brain. Places of formation and ways of excretion of cerebrospinal fluid.

Topic 31. Organ of taste and smell. Skin, mammary glands. Pathways and centers of analyzers.

Topic 32. Organ of vision, eyeball. Nucleus of the eye. Auxiliary apparatus of the eye. The visual pathway and the pupillary reflex pathway.

Topic 33. External ear, middle ear. Inner ear. Conductive pathways of the organ of hearing and balance.

Topic 34. I, II, III, IV, VI pair of cranial nerves.

Topic 35. Trigeminal nerve.

Topic 36. Facial nerve. VIII pair of cranial nerves. IX, X (head and cervical sections), XI, XII pairs of cranial nerves.

Topic 37. Spinal nerves. Plexus: cervical, brachial, lumbar, sacral. Thoracic spinal nerves. The autonomic nervous system is the sympathetic division and the parasympathetic division.

Topic 38. Description of anatomical preparations for topics from the nervous system and sensory organs.

Content module 5. Cardiovascular system.

Topic 39. Heart: topography, valve listening sites, structure, chambers. Circulatory circles. Blood vessels and nerves of the heart.

Topic 40. Aorta: parts, branches of the aorta. External carotid artery, branches. Internal carotid artery

Topic 41. Superior vena cava. Veins of the head and neck, upper limb.

Topic 42. Inferior vena cava. Veins of the walls and organs of the pelvis, veins of the lower limb. Veins of the abdominal cavity. Portal vein. Concept of venous anastomoses

Topic 43. Lymphatic system, structure, function, trunks. Lymphatic vessels and nodes of the head and neck.

List of recommended literature. Basic

1. Human anatomy: a textbook /V.R. Cherkasov, S.Y. Kravchuk. Vinnytsia: New book, 2020. 656 p.

2. Atlas of human anatomy: 7th edition / Frank G. Netter (bilingual) [science. ed. trans.from English L.R. Mateusz-Watseba, others]. All-Ukrainian. Special "Medytsina"publishing house, 2020. 736 p.

3. Sobotta. Atlas of human anatomy. In 2 volumes. Processing and editing of the Ukrainian edition: V.G. Cherkasov, trans. O.I. Kovalchuk. Kyiv: Ukrainian Medical Bulletin, 2019.

Additional

1. Human anatomy: a textbook in three volumes / edited by prof. V.G. Kovechnikov. Lugansk 2011.

2. Gray's Anatomy/H. V. Carter Henry Gray/ Barnes & Noble, 2018. 1280 p.

3. Test tasks "Step-1" - human anatomy / 5th edition, revised / Edited by V.G. Cherkasova, I.V. Dzevulska I.V., O.I. Kovalchuk Tutorial. 2016. 100 p.

4. Human anatomy. V.G. Cherkasov, S.Yu. Kravchuk – Vinnytsia: Nova kniga, 2015.184 p. (educational and methodical manual).

5. Human anatomy (control of independent preparation for practical classes) for students. higher medical (pharmaceutical) studies. closing IV level of accreditation] / Educational and methodological manual / Edited by V.G. Cherkasova, I.V. Dzevulska I.V., O.I. Kovalchuk

6. Frederic Martini Anatomical atlas of man: Trans. from the 8th Eng. Type [scientificed.trans. V.G. Cherkasov], A-USPH "Medicine", 2017. 128 p. (Atlas)

13. Electronic Information Resources

- 1. <u>http://anatom.ua</u>. is a leading resource on Human Anatomy
- 2. <u>https://www.primalpictures.com</u>. is a 3D anatomy resource for educators, students, practitioners, and professionals
- 3. <u>https://www.visiblebody.com</u> is a resource of the international educational community "Visible Body"
- 4. <u>https://3d4medical.com</u> The World's Most Advanced 3D Anatomy Platform
- 5. <u>https://info.odmu.edu.ua/chair/anatomy/files/6/ua</u> materials from the course "Human Anatomy"

EVALUATION Forms of control and methods of assessment (including criteria for assessing learning outcomes)

Current control: oral questioning, testing, assessment of the implementation of practical skills knowledge of anatomical preparations, followed by analysis and assessment of sex, age, individual features of the structure of human organs, solving situational problems, assessment of skills to analyze topographic and anatomical relationships of human organs and systems; assessment of skills to analyze the patterns of prenatal and early postnatal development of human organs, variants of organ variability, malformations; control over the correctness of filling out the Self-Study Notebook, assessment of activity in the classroom.

Final control: exam.

Assessment of current learning activities in the practical lesson:

Assessment of the success of studying each topic of the discipline "Human Anatomy" is carried out on a traditional 4-point scale.

- 1. Assessment of theoretical knowledge on the topic of the lesson by questioning, solving tests and situational tasks: The maximum score is 5, the minimum grade is 3, and the unsatisfactory grade is 2.
- 2. Assessment of practical skills and manipulations on the topic of the lesson:

The maximum score is 5, the minimum grade is 3, and the unsatisfactory grade is 2.

The grade for one practical lesson is the arithmetic mean for all components and can only have an integer value (5, 4, 3, 2), which is rounded according to the statistical method.

At the practical lesson, students must be interviewed at least once in 2 practical classes, at least 75% of applicants. At the end of the semester, the number of grades for applicants in the group should be the same on average.

Score	Evaluation criteria
Excellent "5"	The applicant is fluent in the material, takes an active part in the
	discussion and solution of tests, situational clinical tasks,
	confidently demonstrates practical skills during the examination
	and description of an anatomical preparation. Expresses his/her
	opinion on the topic of the lesson, demonstrates clinical thinking.
Well	The applicant has a good command of the material, participates in
«4»	the discussion and solution of situational clinical problems, tests,
	demonstrates practical skills during the examination and
	description of an anatomical drug with some errors, expresses his
	opinion on the topic of the lesson, demonstrates clinical thinking.
Satisfactory	The higher education applicant does not have sufficient
"3"	knowledge of the material, hesitantly participates in the discussion
	and solution of a situational clinical problem, demonstrates
	practical skills during the examination and description of an
	anatomical preparation with significant errors.
Disappointing	
«2»	not participate in the discussion and solution of a situational
	clinical problem, does not answer tests, does not demonstrate
	practical skills during the examination and description of an
	anatomical preparation.

Criteria for current assessment in the practical lesson:

Only those applicants who have fulfilled the requirements of the curriculum in the discipline, have no academic debt, their average score for the current educational activity in the discipline is at least 3.00 and they have passed the test control on the tests "KROK-1" by at least 90% (50 tasks) are allowed to the final

control in the form of an exam.

Test control is carried out in the Educational and Production Complex of Innovative Technologies of Training, Informatization and Continuing Education of ONMedU at the last lesson on the eve of the exam.

Assessment of learning outcomes during the final control – exam.

The exam is held in the Educational and Production Complex of Innovative Teaching Technologies, Informatization and Internal Monitoring of the Quality of Education of the University during the examination sessions at the end of the semester (autumn and spring) according to the schedule.

During the exam, the applicant receives a standardized ticket, and the examiners use a checklist for the corresponding ticket with reference answers and determine which mandatory components of the answer were named or not named by the applicant.

Ticket contents
Overview and description of the anatomical specimen
UDRZ
4 (four) theoretical questions

The total score for the exam is compiled as the arithmetic mean of all grades received for answers to theoretical questions and practical tasks on a traditional four-point scale, rounded to two decimal places.

Criteria for assessing the learning outcomes of applicants in the exam

Score	Evaluation criteria
Perfectly	It is awarded to a higher education applicant who has worked
«5»	systematically during the semester, has shown during the exam a versatile and deep knowledge of the program material, is able to successfully perform the tasks provided by the program, has mastered the content of the main and additional literature, has realized the relationship between individual sections of the discipline, their importance for the future profession, has shown creative abilities in understanding and using educational and program material, has shown the ability to independently update and replenishment of knowledge; level of competence – high (creative);
Well	It is given to a higher education applicant who has shown full
«4»	knowledge of the educational and program material, successfully performs the tasks provided by the program, has mastered the basic literature recommended by the program, has shown a sufficient level of knowledge in the discipline and is capable of their independent updating and updating in the course of further

	education and professional activity; level of competence – sufficient (constructive-variable)
Satisfactory «3»	It is awarded to a higher education applicant who has shown knowledge of the main educational and program material to the extent necessary for further study and subsequent work in the profession, copes with the tasks provided for by the program, made some mistakes in the answers to the exam and when performing exam tasks, but has the necessary knowledge to overcome the mistakes made under the guidance of a scientific and pedagogical worker; Level of competence – intermediate (reproductive)
Disappointing «2»	It is given to a higher education applicant who has not shown sufficient knowledge of the basic educational and program material, has made fundamental mistakes in the performance of the tasks provided by the program, cannot use the knowledge in further education without the help of a teacher, has not been able to master the skills of independent work; Level of competence – low (receptive-productive)

9. Distribution of points received by higher education applicants

The average score for the academic discipline for applicants who have successfully mastered the work program of the discipline is converted from the traditional four-point scale into points on a 200-point scale, as shown in the table:

Traditional four-point scale	Multi-point 200-point scale
Excellent ("5")	185 - 200
Good ("4")	151 - 184
Satisfactory ("3")	120 - 150
Unsatisfactory ("2")	Below 120

Traditional Score to Multipoint Scale Conversion Table

A multi-point scale (200-point scale) characterizes the actual success of each applicant in mastering the educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is carried out by the Information and Technical Department of the University.

According to the points received on a 200-point scale, the achievements of applicants are evaluated according to the ECTS rating scale. Further ranking according to the ECTS rating scale allows you to evaluate the achievements of applicants in the educational component, who are studying in the same course of the same specialty, in accordance with the points they receive.

The ECTS scale is a relative comparative rating scale, which establishes the applicant's belonging to the group of the best or worst among the reference group of fellow students (faculty, specialty). A grade "A" on the ECTS scale cannot be equal to an "excellent" grade, and a grade "B" cannot be equal to a "good" grade, etc. When converting from a multi-point scale, the boundaries of grades "A", "B", "C", "D", "E" on the ECTS scale do not coincide with the limits of marks "5", "4", "3" on the traditional scale. Applicants who have received "FX" and "F" ("2") grades are not included in the list of ranked applicants. The "FX" grade is given to applicants who have scored the minimum number of points for the current educational activity, but who have not been credited with the final control. The grade "F" is given to applicants who have attended all classes in the discipline, but have not received an average score (3.00) for the current educational activity and are not allowed to the final control.

Applicants studying in one course (one specialty), based on the number of points scored in the discipline, are ranked on the ECTS scale as follows:

Conversion of the traditional grade in the discipline and the sum of points on
the ECTS scale

ECTS score	Statistical indicator
And	Top 10% of applicants
Into	The next 25% of applicants
С	The next 30% of applicants
D	The next 25% of applicants
E	The next 10% of applicants

INDEPENDENT WORK OF HIGHER EDUCATION APPLICANTS

Assessment of the student's independent work. The material for independent work of students, which is provided in the topic of the practical lesson simultaneously with the classroom work, is evaluated during the current control of the topic in the relevant classroom lesson.

ACADEMIC DISCIPLINE POLICY

Deadline & Retake:

- Absences from classes for unreasonable reasons are worked out according to the schedule for the teacher on duty.
- Absences for valid reasons are worked out according to an individual schedule with the permission of the dean's office.

Academic Integrity:

It is mandatory to observe academic integrity by applicants, namely:

- independent performance of all types of work, tasks, forms of control provided for by the work program of this discipline;
- references to sources of information in the case of using ideas, developments,

statements, information;

- compliance with the legislation on copyright and related rights;
- providing reliable information about the results of their own educational (scientific) activities, research methods used and sources of information.

Unacceptable in educational activities for participants in the educational process are:

- the use of family or official ties to obtain a positive or higher grade in the exercise of any form of control over learning outcomes or preferences in scientific work;
- use of prohibited auxiliary materials or technical means (cheat sheets, notes, micro-headphones, phones, smartphones, tablets, etc.) during control measures;
- passing the procedures for monitoring the results of training by fictitious persons.

For violation of academic integrity, students may be held accountable for the following academic liability:

- decrease in the results of the assessment of the test, grade in the classroom, test, etc.;
- repeated assessment (test, test, etc.);
- appointment of additional control measures (additional individual tasks, tests, tests, etc.);
- conducting an additional check of other works authored by the violator. *Attendance & Tardiness:*

Dress code: medical gown, cap.

Equipment: notebook, pen.

Health condition: applicants with acute infectious diseases, including respiratory diseases, are not allowed to study.

An applicant who is late for a lesson can attend it, but if the teacher put "nb" in the journal, he must work it out in the general order.

Use of mobile devices: Mobile devices can be used by applicants with the permission of the teacher, if they are needed to complete the task.

Behavior in the classroom: The behavior of students and teachers in the classrooms should be working and calm, strictly comply with the rules established by the Regulations on Academic Integrity and Ethics of Academic Relations at the Odessa National Medical University, in accordance with the Code of Academic Ethics and Relations of the University Community of the Odessa National Medical University, Regulations on the Prevention and Detection of Academic Plagiarism in Research and Educational Work of Higher Education Applicants, Scientists and Teachers of Odessa National Medical University