ODESSA NATIONAL MEDICAL UNIVERSITY
Dentistry faculty,
Department of Normal and Pathological Clinical Anatomy

SYLLABUS OF ACADEMIC DISCIPLINE «HUMAN ANATOMY»

Course scope	Total hours/credits – 226 / 7,5
Semester, year of study	First year of university: I semester - 106 hours/ 3,5 credits II semester – 120 hours/ 4 credits
Days, time, location	According to the schedule. Practical and seminars classes are held in the 1st and 2nd anatomy halls, as well as in the academic rooms of the department, according to the schedule of classes.
Teachers	1. Appelhans Elena, Head of the Department, Professor, PHD 2. Nescoromna Natalia, Associate Professor, PhD. 3. Matiushenko Phylyp, senior teacher 4. Kuznyetsova Elena, senior teacher 5. Chebotarova Svetlana, senior teacher 6. Antonova Natalya, senior teacher 7. Kozhukharenko Tatiana, assistant 8. Ursu Alexandr, assistant 9. Ostapenko Andrey, assistant 10. Prus Ruslan, assistant, PhD 11. Kozachenko Anastasia, assistant .
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Teacher's workplace	1. Nescoromna Natalia – anatomy hall N 2 3. Matiushenko Phylyp – study room N 3 4. Kuznyetsova Elena – study room N 1 5. Chebotarova Svetlana - anatomy hall N 2 6. Antonova Natalya - anatomy hall N 1 7. Kozhukharenko Tatiana - study room N 1 8. Ursu Alexandr - anatomy hall N 1 9. Ostapenko Andrey - anatomy hall N 2 10. Prus Ruslan - study room N 2 11. Kozachenko Anastasia study room N 2
Counseling for students	Tuesday, Thursday - 14.30 - 17.30. Conducted by the teacher on duty according to the duty schedule. During the quarantine period - on-line Zoom.

The communication is done: with help of E-mail of the department: **anatomy@onmedu.edu.ua,** as well as for additional messengers **Viber** and **Telegram,** as well as **www.anatom.in.ua, https://anatom.ua/https://meduniver.com / Medical / Anatom**

COURSE ANOTATION

The study of the discipline "Human Anatomy" for students of the Faculty of Dentistry is an adapted to the needs of medicine classic model of the university course, providing for each student to acquire knowledge in the world of natural scientific 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 activity of the doctor.

Subject of study of the discipline "human anatomy": the science of the form, structure, origin and development of organs, systems and the human body as a whole.

Interdisciplinary connections

Human anatomy as an academic discipline:

(a) builds upon students' study of medical biology, histology, cytology and embryology, biophysics, Latin, ethics, philosophy, and ecology and integrates with these disciplines;

b) lays the foundation for the study of normal and pathological physiology, pathological anatomy, operative surgery and topographic anatomy, deontology, propaedeutics of clinical disciplines and the formation of abilities to apply knowledge of human anatomy in the further study of all clinical disciplines and in the future professional activity.

Aims and objectives of the study of academic discipline

The objective of the course is for each student to acquire knowledge of anatomy in the world of natural sciences about the structure and functions of the human body as a whole and to be able to use the acquired knowledge in the further study of other fundamental sciences of medicine and in the practice of medicine.

The purpose of the study of human anatomy - the ultimate goals are set on the basis of the basic educational program of doctor's training in accordance with the block of its content module (natural-science training) and is the basis for the construction of the content of the study discipline. Description of the objectives is formulated through the skill in the form of target tasks (actions). On the basis of the ultimate goals for each module specific goals in the form of certain skills (actions), target tasks ensuring the achievement of the ultimate goal of the discipline are formulated.

Final objectives of the discipline:

- Know the structure of the human body, systems, organs and tissues;

- Be able to determine the topographic-anatomical relations of human organs and systems;

- Interpret the patterns of perinatal and early postnatal development of human organs, variants of organ variability, malformations;

- Interpret sex, age and individual features of the structure of the human body;

- To provide for interdependence and unity of structures and functions of human organs their variability under the influence of ecological factors;

- Identify the influence of social and working conditions on the development and structure of the human body;

- Demonstrate mastery of moral and ethical principles of the attitude toward the living person and his/her body as an object of anatomical and clinical study.

The main objectives of the study of human anatomy as a science is a systematic approach to the description of the form, structure of organs, position (topography) of parts and organs of the body in unity with the functions performed, taking into account age, sex and individual characteristics of the person.

Competencies and learning outcomes, the formation of which contributes to the discipline (the relationship with the normative content of the training of higher education applicants, formulated in terms of results in the standard). According to the requirements of the standard, the discipline ensures that students acquire competencies:

- **integral:** the ability to solve typical and complex specialized problems and practical problems in the process of learning for the future professional activity in the field of health care, or in the process of learning, involves research, innovation and is characterized by the complexity and uncertainty of conditions and requirements.

- general:

1. Ability to apply knowledge in practical situations.

2. Knowledge and understanding of the subject and application to the profession.

3. Ability to exercise self-regulation, maintain a healthy lifestyle, ability to adapt and act in a new situation.

4. Ability to choose communication strategies; ability to work in a team; interpersonal interaction skills.

5. Ability to communicate in native language both orally and in writing; ability to communicate in another language.

6. Skills in the use of information and communication technology.

7. Ability to think abstractly, analyze and synthesize; ability to learn and be modernly trained.

8. Ability to evaluate and ensure the quality of work performed.

9. Determination and perseverance in the tasks assigned and responsibilities undertaken.

10. The ability to act in a socially responsible and socially conscious.

11. The desire to preserve the environment.

- **special (professional, subject matter):**

ability to evaluate the results of laboratory and instrumental examinations.

Learning outcomes:

Integral final program learning outcomes to which the academic discipline contributes:

1. Ability to identify knowledge in practical situations

2. Ability to use knowledge and understanding of the subject area and understanding of the profession.

3. Understanding of self-regulation and maintaining a healthy lifestyle, the ability to adapt and act in a new situation.

4. Ability to be aware of communication strategy choices, ability to work in a team; interpersonal interaction skills

5. Ability to communicate effectively and to formulate and solve problems in the native language, both orally and in writing.

6. Ability to use some information and communication technology.

7. Understanding of applied techniques and methods of analysis, design, and research, and their limitations according to specialization.

8. Ability to analyze and evaluate the results of research on age, sex, individual characteristics of the anatomical structure of human organs combined into body systems, the relationship of organs and systems, the influence of social conditions and work on the development and structure of the human body, select and apply typical experimental methods, interpret research results.

9. Practical skills in solving complex problems of anatomical and biological projects and conducting research according to the specialization.

10. Ability to collect, interpret relevant data, and analyze complexities within the specialization to convey judgments illuminating social and ethical issues.

11. Understanding and commitment to environmental preservation.

12. Ability to demonstrate an up-to-date level of knowledge of human anatomy major issues in relation to medical problem solving.

13. Ability to demonstrate, understand, and evaluate the results of the study of age, sex, and individual features of the anatomical structure of human organs combined into body systems.

14. Ability to analyze and interpret the topographic-anatomical relations of human organs and systems, peculiarities of blood supply and innervation, influence of social conditions and work on development and structure of human body, physical and chemical processes taking place in the body.

15. Ability to compare the fundamental knowledge of the structure of the human body to the principles of medicine and to develop components and processes of clinical research based on these principles.

Learning outcomes for the discipline

Know:

(a) The shape and structure of organs combined into systems:

- shape and structure of bones

- bone connections

- muscles (systema musculare)

- innards (systema digestorium, respiratorium, urinarium, genitalia) ;

- the central and peripheral nervous system (including the autonomous division of the peripheral nervous system (systema nervorum)

- Organs of internal secretion (glandulae endocrinae)

- The organs and formations of the immune system;

- The lymphoid system (systema lymphoideum)

- sense organs

- integumentum commune

- cardiovascular (systema cardiovasculare)

b) mutual arrangement of organs, vessels, nerves in different parts of the body, is of great importance for surgery;

c) age and sex aspects of anatomical peculiarities of human individual development at different stages of ontogenesis;

d) regularities of perinatal and early postnatal development of human organs, variants of organ variability, malformations.

To be able to:

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

- identify topographic-anatomical relations of human organs and organ systems on anatomical preparations;

- evaluate age, sex and individual peculiarities of the structure of human organs;

-evaluate the impact of social and working conditions on the development and structure of the human body;

- apply Latin anatomical terms according to the requirements of the international anatomical nomenclature (Sao Paulo, 1997; Kiev, 2001);

COURSE DESCRIPTION

Forms and methods of teaching:

The course will be delivered in the form of lectures (52 hours), practical (102 hours) classes and the organization of the students' independent work (72 hours).

Topics of ***the lecture course*** will cover the problematic issues of the corresponding chapters of human anatomy.

Practical classes include:

- mastering by students the structure and topography of human organs and organ systems;

- Identification of human organs and systems on anatomical specimens;

- Acquiring Latin terminology in accordance with the requirements of the international anatomical nomenclature (São Paulo, 1997);

The assimilation of the topic is controlled in the practical classes according to the specific objectives.

It is recommended to use such means of diagnostics of the level of students' training: computer tests, solving situational tasks, control of practical skills of knowledge of anatomic preparations. analysis of regularities of perinatal and early postnatal development of human organs, variants of organ variability, defects of development.

Final control of assimilation of material is carried out on their completion. Assessment of the student's progress in the discipline is rating and is exposed to the system of ECTS and the scale adopted in Ukraine.

Content of the training discipline:

1. Introduction to anatomy.

2. anatomy of the bones of the skeleton.

3. Connection of the bones of the skeleton.

4. Myology.

5. Anatomy of the digestive system.

6. Anatomy of the respiratory system.

7. Anatomy of the urinary system.

8. Anatomy of the genital organs.

9. Anatomy of the organs of the immune and endocrine systems.

10. Anatomy of the spinal cord.

11. Anatomy of the brain.

12. The organs of the senses.

13. Cranial nerves.

14. Anatomy of the heart.

15. Vessels and nerves of the head and neck.

16. Vessels and nerves of the trunk.

17.Vessels and nerves of the extremities.

List of recommended literature

Basic literature:

1. Human anatomy: a textbook: in 3 volumes, V 3 / A.S. Golovatsky, V.G.Cerkasov, M.R. Sapin and others - Est. 3rd, finished - Vinnitsa: Nova kniga, 2015. - 376 pp. : il.

2. Cherkasov V.G., Bobryk I.I., Guminsky Yu.Y., Kovalchuk O.I. International Anatomical Terminology (Latin, Ukrainian, Russian and English equivalents) Vinnitsa: Nova kniga, 2010. - 392 p. (Tutorial)

3. Cherkasov V.G., Khmara T.V., Makar B.G., Pronyaev D.V. Human anatomy. Chernivtsi: Medical University. 2012. - 462 pp. (textbook)

4. Human anatomy. V.G. Cherkasov, S.Yu. Kravchuk - Vinnytsya: Nova kniga, 2011. – 640p. (teaching tutorial)

5. Human anatomy / [Koveshnikov V.G., Bobryk I.I., Golovatsky A.S. et al.]; ed.by V.G. Kovezhnikov - Lugansk: Virtual Reality, 2008. - Vol.3.- 400.

6. Sobotta. Atlas of human anatomy. In two volumes. Edited by Ukrainian edition: V.G. Cherkasov., transl. by O. I. Kovalchuk. - Kyiv: Ukrainian Medical Bulletin, 2009.

Additional:

1. Cherkasov V.G., Guminsky Yu.Y., Cherkasov E.V., Shkolnikov V.C. History of Anatomy (developmental history and outstanding anatomists). Lugansk: LTD "Virtual Reality", 2012. - 148 p. (tutorial manual).

2. Mcq for "KROK-1" – human anatomy / Edition 4, revised / Edited by V.G.Cherkasov, I.V.Dzevulskaya IV, O.I.Kovalchuk. Tutorial.

3. Educational manual. Control of independent preparation for practical classes. Module 1 "Anatomy of the locomotor aparate", Module 2 - Splanchonology. Central nervous system. Organs of Sense ", Module 3 -" Heart. Anatomy of the cardiovascular system. " [for the students of higher medical school (pharmaceutical) training. of IV level of accreditation] / Edited by V.G. Cherkasov, I.V. Dzevulskaya, O.I. Kovalchuk.

4. Netter F. Atlas of Human Anatomy / Frank Netter [trans. from english A.A. Zegelsky]. - Lviv: Nautilus, 2004 - 529 p.

5. Frederic Martini Atlas of Human Anatomy: Transl. from the 8th English ed [science adv. V.G.Cherkasov], VSV "Medicine", 2011. - 128 p. (Atlas)

Informational recourses

http://anatom.in.ua

https://anatom.ua/

https://meduniver.com/Medical/Anatom/

https://www.primalpictures.com/

https://www.visiblebody.com/

https://3d4medical.com/

Evaluation criteria

Various forms of knowledge control are used (oral, written, combined, testing, practical skills, etc.).

The results of the academic progress of students are put in the form of grades on a national scale, 200-point and ECTS scale and have standardized generalized criteria for assessing knowledge:

1. National scale:

- grade "excellent" (5) is awarded to a student who systematically worked during the semester, showed during the exam versatile and deep knowledge of the program material, is able to successfully perform the tasks provided by the program, has mastered the content of basic and additional literature, has realized the relationship of individual sections of the discipline, their importance for the future profession, found creative abilities in understanding and using the educational and program material, has shown the ability to independently update and replenish knowledge. The level of competence is high (creative);

- a "good" grade (4) is given to a student who found full knowledge of the curriculum material, successfully completes the assignments included in the program, has absorbed the basic literature recommended by the program, has sufficient knowledge of the discipline and is able to independently update and refresh them during further study and professional activities; the competence level is sufficient (constructively-variant);

- assessment "satisfactory" (3) is awarded to a student who found knowledge of the basic curriculum material to the extent necessary for further study and subsequent work in the profession, copes with the tasks provided by the program, made some mistakes in answering the exam and in the performance of examination tasks, but has the necessary knowledge to overcome the mistakes made under the guidance of a scientific and pedagogical employee. The level of competence is average (reproductive);

- the grade of "unsatisfactory" (2) is given to the student who did not reveal sufficient knowledge of the basic curriculum material, made fundamental mistakes in the performance of the tasks provided by the program, cannot use the knowledge without the help of the teacher to further study, could not master the skills of independent work; the competence level is low (receptive - productive).

The final control in the form of credits is evaluated on a two-point scale:

- The mark "passed" is given to a student who has fulfilled the curriculum of the discipline, has no academic arrears; the level of competence is high (creative)

- The grade "failed" is given to a student who didn't follow the study plan of the discipline, has academic debts (grade point average is less than 3.0 and / or absences) level of competence - low (receptive - productive).

2. ***Multi-point scale*** characterizes the actual performance of each student in mastering the academic discipline. The conversion of the traditional grade for the discipline into a 200-point grade is performed by the University Information and Computing Center with the "Contingent" program according to the formula: grade point average (current / in discipline) x 40. **A national grade of "5" scores 185-200, "4" scores 151-184. "3" - 120-150.**

3. ***The ECTS rating scale*** evaluates the achievements of students in the discipline, who are studying in the same course in the same major, according to the points they received, by ranking, namely: ECTS Statistical Score "A" top 10% of students, "B" next 25% of students, "C" next 30% of students, "D" next 25% of students, "E" last 10% of students. The ECTS scale establishes whether a student belongs to the group of the best or the worst among the reference group of fellow students (department, specialty) is his/her rating. When converting from a multi-point scale, as a rule, the boundaries of grades "A", "B", "C", "D", "E" do not coincide with the boundaries of grades "5", "4", "3" on the traditional scale. An "A" grade on the ECTS scale cannot equal an "excellent" grade and a "B" grade cannot equal a "good" grade. Students who receive grades of "FX" and "F" ("2") are not entered into the list of students ranked. Such students automatically receive a grade of "E" after retake. A grade of "FX" is assigned to students who have earned the minimum number of points for current academic activities, but who are not given credit for the final control. The grade of "F" is given to students who attended all classroom sessions in the discipline, but did not get an average score (3.00) for the current academic activities and are not allowed to the final control.

1. Current progress:

At the last practical lesson, the teacher is to announce to students the results of their current academic grades, academic debt (if any). Only those students who have no

academic debts and have an average grade of at least 3.00 for the current academic activities are allowed to take part in the final attestation.

2. Type of final control

In the discipline "Human Anatomy" final control is in the form of an exam.

3. Grades for the course

To grade a discipline on a 4-point traditional (national) scale, the average score for the discipline is calculated as the arithmetic mean of two components:

1) the current grade point average as the arithmetic average of all current grades (calculated as a number rounded to 2 decimal places)

4,45 - 5,0 «5»

3,75 - 4,44 «4»

3,0 - 3,74 «3»

2) the traditional exam grade.

The results of the exams are evaluated on a 4-point national scale ("excellent", "good", "satisfactory", "unsatisfactory") and a 200-point scale, and are entered on the examination record and the student's record book.

Example:
- Current grade point average is 4.75
- Examination grade - 4
- average grade for the discipline - (4.75 + 4): 2 = 4.38
- traditional grade for the discipline – 4

The conversion of the traditional grade for the discipline into a 200-point grade is performed by the University Information and Computing Center with the "Contingent". Converting the result of the student's study of the discipline on a 200-point scale and further ranking on a rating scale (ECTS) is necessary to implement the academic mobility of students. This allows the student to continue his or her studies in that discipline at another institution or in another country.

170 to 200 - Excellent (A) (excellent performance with only minor errors)
155 to 169 - Very good (B) (above average with few errors)
140 to 154 - Good (C) (generally satisfactory, with some significant errors)
125 to 139 - Satisfactory (D) (not bad, but with some significant deficiencies)

111 (min) to 124 - Sufficient (E) (performance satisfies the minimum criteria)
60 to 110 - Satisfactory (D) (not bad, but with some significant deficiencies)

1 to59 - Unsatisfactory (F) (with obligatory repeat course of the discipline)

Assessment of the student's independent work

Material for independent work of students, which is provided in the topic of practical training simultaneously with the classroom work, is assessed during the current control topics at the appropriate classroom training.

Evaluation of topics that are carried out for independent work and are not included in the topics of classroom training are controlled during the final control of the topic.

Evaluation of the Student's Individual Work

A maximum of 4 points is awarded for the student's individual work. Grades for individual work are added to the sum of the grades for the student's current course work.

Points for individual work may be awarded to students who have written and reported on essays from the recommended topics with the use of additional literature and have won prizes for participation in the Olympiad in the discipline among students of their university and higher educational institutions of Ukraine.

Recommendations of the Department of Human Anatomy on the system of making up missed training classes.

A student who has missed practical training classes must process them independently (without grades).

To work on the missed class the student should have:

- a dictionary of Latin terms on the topic of the class;
- a lecture conspectus;
- diagrams, drawings, provided in the process of independent work of the student
- A short synopsis, which reflects the basic factual material of the topic.

The instructor marks the presence of this list in the journal.

Recommendations on the methodology of students' independent preparation for practical exercises:

1. Read the topic of the class from the textbook;
2. During the second, more in-depth reading, prepare a brief outline of the topic;
3. Write out in the dictionary and study the Latin terms on the topic of the lesson;
4. Review in the atlas the anatomical structures described in the material of the topic of the class.
5. Prepare answers to questions on the topic of the missed class, which are specified in the methodological developments of the department.
6. Prepare diagrams and pictures of the structure of different anatomical structures, which are provided by the methodical developments of the department "Educational-methodical manual. Control of independent preparation for practical classes". [For students of higher medical (pharmaceutical) educational institutions. IV accreditation level]. stamp of Ministry of Health of Ukraine, Ministry of Education and Science of Ukraine, protocol № 1 / 11-1165 from 23.02.2010.
7. The anatomical structures in the sectional hall should be examined and studied using anatomical specimens in accordance with the questions listed in the guidelines (list of practical skills);

The most difficult and incomprehensible for the student questions you can ask the teacher at the beginning of the missed lesson.

During the workout, the student:
- answers the teacher's basic and finite level questions;
- answers the teacher's questions about the definition of anatomical structures on X-ray, CT, MRI, angiograms (visualization of anatomical formations by modern clinical research methods)
- demonstrates knowledge of practical skills on cadaveric material, individual anatomical preparations, skull, skeleton, plaster casts, tables;
- gives answers to 10 standardized test questions (CRQ-1).

Attendance at all types of classroom sessions (lectures, practical classes) is mandatory.

Late attendance at all types of classroom lessons (lectures, practical classes) is not allowed.