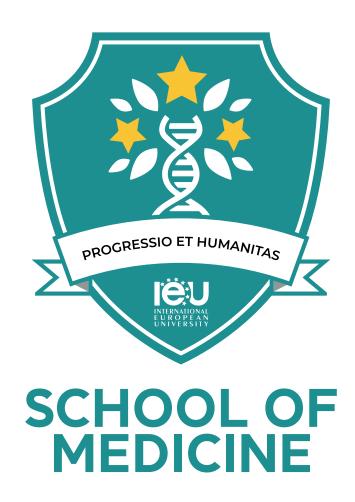




INTERNATIONAL EUROPEAN UNIVERSITY

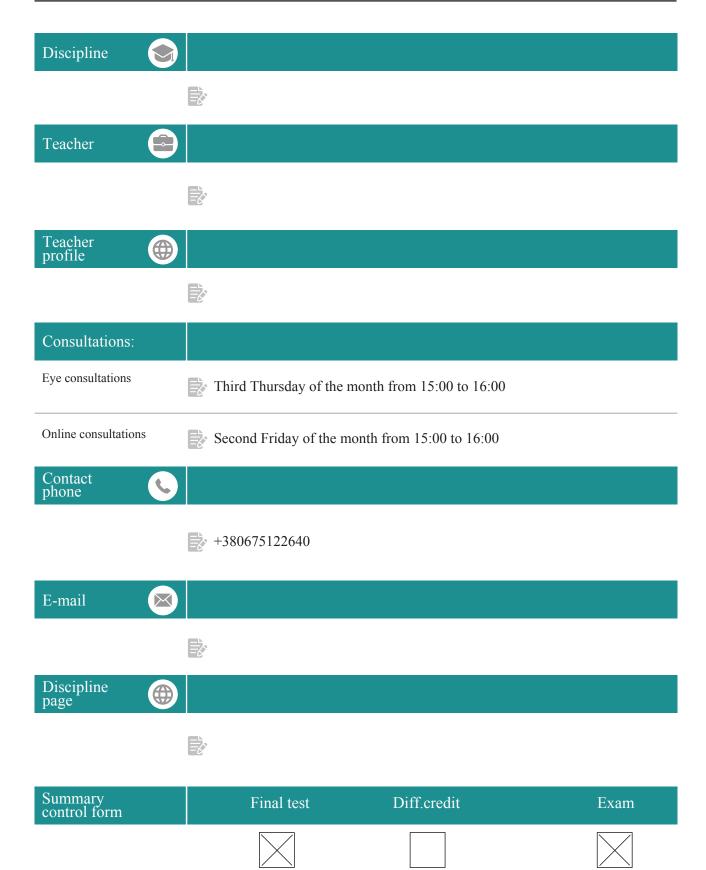


Human anatomy

2021











1 Short abstract of the discipline

The study of the discipline "Human Anatomy" for doctors is an adapted to the needs of medicine classic model of the university course, which involves the acquisition by each student of knowledge in the world of natural and scientific ideas about the structure and function 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 the doctor.

2 Prerequisite for studying the discipline

Interdisciplinary connections: topographic anatomy and surgical surgery, histology, normal physiology, surgery, therapy, radiology, neurology, dentistry, etc.

The purpose and objectives of the discipline

The purpose of teaching the discipline "Normal anatomy" follows from the goals of the educational and vocational training program for graduates of higher medical educational institutions and are determined by the content of those systemic knowledge and skills that a specialist doctor should master. The knowledge that students receive from the discipline "Normal anatomy" are basic for a block of disciplines that provide natural and scientific (block PN) and vocational (block PP) training.

The main tasks of studying the discipline "Normal anatomy" are:

- Analyze information about the structure of the human body, the systems that make up it, organs and tissues.
- To demonstrate the possession of moral and ethical factors of attitude to a living person and his body as an object of anatomical and clinical research.
- To interpret the patterns of prenatal and early postnatal development of human organs, variants of organ variability, developmental failure.
- Interpret sexual, age and individual features of the structure of the human body.
- To explain the patterns of development and features of the structure of human organs and systems at the macro- and microscopic levels.
- To predict interdependence and unity of structures and functions of human organs their variability under the influence of environmental factors; to determine the topographic and anatomical relations of human organs and systems.
- Determine the impact of social conditions and labor on the development and structure of the human body.

4 Learning Outcomes

PLO -14. Determine the source and/or location of the necessary information depending on its type; obtain the necessary information from a specified source; process and analyze the information received.

PLO -24. Comply with the requirements of ethics, bioethics and deontology in its professional activity.

ECTS Loans

12 creeds / 360 academic hours





6 Structure of discipline

| Theme | Lecture | Practical Practical (seminar) classes | SRS | Individual |
|---|---------|---------------------------------------|-----|------------|
| Table of contents module 1. Introduction to anatomy. Bone anatomy | | | | |
| Subject1: What do you want to do? Subject and tasks of anatomy. Methods of research in anatomy. Main modern directions of anatomy development Development of Ukrainian anatomical schools. Kyiv Anatomical School. Lviv Anatomical School. The main stages of ontogenesis. Classification of fabrics. Anatomical nomenclature. Axis and plane of the body. Bone as an organ. Classification of bones. | 3 | 2 | 7 | |
| Theme 2. The doctrine of the bones of the frontal, parily, occipipial, lattite bones. | | 2 | 4 | |
| Theme 3. Wedge-shaped, temporal bone. | - | 2 | 4 | |
| Theme 4. Facial skull. Eye pit, bone nasal cavity. | - | 2 | 4 | |
| Theme 5. The outer and inner bases of the skull. Temporal, under-screen, wing-pits. | - | 2 | 4 | |
| Theme 6. Bones of the upper limb. | | 2 | 3 | |
| Theme 7. Bones of the lower limb. | | 2 | 3 | |
| Theme 8. Practical skills in bone anatomy. | | 2 | 4 | |
| Total content module 1 | 3 | 16 | 33 | |
| Table of contents module 2. Bone connection | | | | |
| Theme 9. Anatomy of continuous and intermittent connections between the bones. Development of compounds between bones in ontogenesis. The connection between the bones of the body and between the bones of the head. | | 2 | 4 | |
| Theme 10. Connecting the bones of the upper limb. | - | 2 | 3 | |
| Theme 11. Connecting the bones of the lower limb. | - | 2 | 4 | |
| Theme 12. Practical skills and generalization of material on anatomy | - | 2 | 4 | |
| Total content module 2 | 3 | 8 | 15 | |





6

Structure of discipline

| Thematic plan of lectures | | | | |
|--|---------|---------------------------------------|-----|------------|
| Theme | Lecture | Practical Practical (seminar) classes | SRS | Individual |
| Table of contents module 3. Muscle anatomy | | • | | |
| Theme 13. Muscle as an organ. Classification of muscles. Development of skeletal muscles. Muscles and fascia of the back. Muscles and fascia. Breast. Aperture. | 3 | 2 | 8 | |
| Theme 14. Muscles and abdominal fascia. Straight muscle vagina | - | 2 | - | |
| Theme 15. Muscles and fascies of the head. Muscles and fascia of the neck. | - | 2 | 6 | |
| Theme 16. Anatomy of the muscles of the upper limb. Topography and | | 2 | 6 | |
| Theme 17. Muscles of the lower limb. Fascia and topography lower limb. | | 2 | 3 | |
| Total content module 3 | 3 | 12 | 31 | |
| Final control | | | | PASSE |
| 1st Semester. Table of contents module 4. "Digestive system". | | | | |
| Theme 19. Introduction to planning. Classification of internal organs. Anatomy of the oral cavity. Palate. Anatomy of the tongue. Anatomy of salivary glands. Anatomy of teeth. Dental-jaw system. | | 2 | 4 | |
| Theme 20. Anatomy of the pharynx, esophagus. Anatomy of the stomach. Areas of the anterior abdominal wall. | | 2 | 4 | |
| Theme 21. Anatomy of the small and large intestines. | | 2 | | |
| Theme 22. Liver, gallbladder. Pancreas. | | 2 | 4 | |
| Theme 23. Anatomy of the reed. | - | 2 | 3 | |
| Theme 24. Practical skills and generalization of material on the anatomy of the digestive system. | - | 2 | 3 | |
| Total content module 4 | 3 | 12 | 16 | |





6

Structure of discipline

| Theme | Lecture | Practical Practical (seminar) classes | SRS | Individual |
|---|---------|---------------------------------------|-----|------------|
| Table of contents module 5. Respiratory system | | - | | |
| Theme 25. General anatomy of the respiratory system. Embryogenesis of the respiratory system. Anatomy of the respiratory system. | 3 | 2 | 1 | |
| Theme 26. Anatomy of the trachea, main bronches, lungs. Pleurisy. The middle of it. | - | 2 | 1 | |
| Total content module 5 | 3 | 4 | 2 | |
| Content module 6. Genital, endocrine and immune systems | | | | • |
| Theme 27. Anatomy of the urinary organs (kidneys, ureter, bladder, diuresis). | 3 | 2 | 3 | |
| Theme28. Anatomically infected with the sex organs. Perineum. Anatomy of female genitalia. | 2 | 2 | 2 | |
| Theme 29. Anatomy of the immune system. | 2 | | 3 | |
| Theme 30. Anatomy of the endocrine system. | 1 | 2 | | |
| Theme 31. Practical skills and generalization of material on anatomy of endocrine, immune, urinary and reproductive systems. Table of contents module. | - | 2 | | |
| Total content module 6 | 8 | 10 | 8 | |
| Table of contents module 7. Anatomy of CNS | | | | |
| Theme 32. Introduction to the central health service. General principles of the structure of reflector arcs. Gray and white substances of the central government. Development of CNS in onto- and phylogenesis. External and internal structure of the spinal cord. Embryogenesis of the brain. | | 2 | 6 | |
| Theme 33. Anatomy of the erebellium. IV ventricle. Diamond-shaped hole. | | 2 | 1 | |
| Theme 34. Anatomy of the middle brain. Anatomy of the intermediate brain. III ventricle. | - | 2 | 4 | |
| Theme 35. Bark, its constituent parts, functions. Sniffer brain. Cloak relief. Localization of functions in the cori hemispheres of the final brain. | - | 2 | 4 | |





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Structure of discipline

| Thematic plan of lectures | | | | |
|--|---------|--------------------------------------|-----|------------|
| Theme | Lecture | Practical Practical ceminar) classes | SRS | Individual |
| Theme 36. Basal nuclei. White matter hemispheres of the final brain. Side ventricle. | _ | 2 | 1 | |
| Theme 37. Shells of the brain and spinal cord. Formation and circulation of cerebrostic fluid. | | 2 | | |
| Theme 38. Ascending leading paths. Downward leading paths. | | 2 | 2 | |
| Theme 39. Practical skills and generalization of the material on the anatomy of the central processing plant. | | 2 | 1 | |
| Total content module 7 | 3 | 16 | 18 | |
| Table of contents module 8. Sense organs | | , | | • |
| Theme 40. Anatomy of the senses. Anatomy of the eye. Leading pathways of the visual analyzer. | 2 | 2 | 2 | |
| Theme 41. Ear anatomy. Leading ways of hearing and balance. | 1 | 2 | 2 | |
| Theme 42. Organ of taste. Organ of smell. Leading ways of taste and smell. Skin, its derivatives. Leading pathways of the skin analyzer. | | 2 | 2 | |
| Theme 43. Practical skills in educational material on anatomy of the senses. | - | 2 | 3 | |
| Total content module 8 | 3 | 8 | 9 | |
| Table of contents module 9. Cranial nerves. Spinal nerves | | | | |
| Theme 44. Classification of cranial nerves. I, II, III, IV, VI, VIII pair of cranial nerves. | 3 | 2 | 3 | |
| Theme 45. V pair of cranial nerves. VII pair of cranial nerves. Vegetative nodules. | - | 2 | 7 | |
| Theme 46. ICH, X, XI, XII pair of cranial nerves. | | 2 | | |
| Theme 47. Spinal nerves. General plan for the formation of somatic nerve plexus. | | 2 | 2 | |
| Theme 48. Practical skills and generalization of material on anatomy of nerves of the head and neck. | | 2 | | |
| Total content module 9 | 3 | 10 | 12 | |
| Final control | | | | PASS |





8

Structure of discipline

| Thematic plan of lectures | | | | |
|--|---------|---------------------------------------|-----|------------|
| Theme | Lecture | Practical Practical (seminar) classes | SRS | Individual |
| 2 semester. Table of contents 10. Vessels of the head and neck | | | | |
| Theme 49. Aorta. Branches of the aorta arc. General and external carotid arteries. | 3 | 2 | - | |
| Theme 50. Internal carotid and connective arteries. | - | 2 | 3 | |
| Theme 51. Veins of the head and neck. Lymph nodes and vessels head and neck. | - | 2 | 6 | |
| Theme 52. Practical skills and generalization of the material on the anatomy of blood vessels and nerves of the head and neck. Vascularization and internalization of the organs of the head and neck. | 3 | 2 | 3 | |
| Total content module 10 | 6 | 12 | 12 | |
| Table of contents 11. Anatomy of the heart. Vessels and nerves of the body | | | | |
| Theme 53. Anatomy of the heart (I): heart topography, anatomy of heart chambers. Large and small circle of blood circulation. Anatomy of the heart (IU): the structure of the heart wall, the blood supply to the heart, the pericardium. Projection of the boundaries of the heart and on the front wall thoracic cavity. | 3 | 2 | 4 | |
| Theme 54. Aorta. Thoracic aorta. Abdominal aorta. Thyremia arteries. | | 2 | 6 | |
| Theme 55. Torso veins: odd and semi-evaporative veins, lower hollow vein, den veins. Gate liver vina. Porto-coffee, coffee and porto-coffee-coffee anastoms. Lymphatic vessels and nodes of the thoracic, abdominal cavity and thyrosis cavity. | | 2 | 2 | |
| Topic 56. Autonomous part of the peripheral nervous system. Pretty part of the ANS. Parasimptic part of the ANS. Vegetative plexes. | 3 | 2 | | |
| Theme 57. Vascularization and internalization of the organs of the thoracic, abdominal cavities and thaz cavity. Practical skills and generalization of the material on the anatomy of the heart, blood vessels and nerves of the body. | - | 2 | | |
| Total content module 11 | 9 | 10 | 12 | |
| Table of contents module 12. Vessels and nerves of the upper and lower extremities | | | | |
| Theme 58. Vessels of the upper limb. Shoulder plexis. | - | 2 | 2 | |
| Theme 59. Vessels of the lower limb. Somatic nerve plex: | 2 | 2 | | |





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Structure of discipline

Thematic plan of lectures

| Theme | Lecture | Practical Practical (seminar) classes | SRS | Individual work |
|--|---------|---------------------------------------|-----|--------------------|
| Theme 60. Vascularization and nervation of the upper and lower extremities. Practical skills and generalization of material with anatomy of blood vessels and nerves of the limbs. | - | 2 | | |
| Total content module 12 | 4 | 6 | | |
| Total hours -360/12 ECTS credits | 64 | 120 | 176 | |

9 Signs of discipline

| Term of teaching | Semester | International disciplinary integration | Course of the year (training) | Cycles: General Training/ Training/ Free Choice |
|------------------|-------------------|--|-------------------------------|---|
| 1 year | I and II semester | Yes | 1 course | General Training Cycle |

10 Rating system and requirements

The current success of students is estimated on a 4-point scale (2; 3; 4; 5) at each practical level, taking into account the approved evaluation criteria for the relevant discipline. The student must receive an assessment on each topic for further conversion of grades into scores on a multi-point (200-point) scale. "5" – the student correctly, fully and reasonably revealed the theoretical question or completed a practical task, demonstrated the ability to independently analyze the material, use the necessary terminology and has a lexical minimum, when answering, teaches the material clearly and logically;

"4" – the student sufficiently fully revealed the essence of the issue, has the necessary terminology and lexical minimum, but some inaccuracies are assumed that did not affect the correct understanding; "3" – receives a student who partially disclosed the content of the issue, at a minimum mastered the necessary terminology and lexical minimum, made mistakes of a principled nature.

Forms of current control:

Oral survey (frontal, individual, combined)

Practical verification of the formed professional skills

Test control (open and closed test tasks)

The student's independent work is evaluated in practical classes and is part of the final assessment of the student.

The final control is carried out in the form of a test in the first semester, and a written exam, which includes: a) test tasks (40), compiled in accordance with the topics of content modules; b) oral survey – complex questions (4), which include theoretical material and practical skills in content modules.

QR Code: https://ieu.edu.ua/docs/rate-of-study.pdf





11

Conditions of admission to final control

Students who have completed all types of work, tasks provided by the curriculum for a semester in accordance with the academic discipline are admitted to semesterfinal control, visited all classes provided for bythe curriculum, wrote and passed the medical history and have an average score for the current academic activity of at least "3" (72points and on a 120-point scale).

QR Code: https://ieu.edu.ua/docs/rate-of-study.pdf

12

Discipline policy

The condition for a successful educational process is the personal observance by each student of a higher educational institution of the rules of conduct adopted both at the university and in society. The future doctor should have a high level of behavior, behave with dignity, tact, maintain endurance and self-control. The student must come to class on time, be dressed in an academic medical uniform (white robe or surgical suit). The student must adhere to the schedule of the educational process, come to classes prepared on the topic of the lesson. During the class, the student should not leave the classroom without the permission of the teacher; use during classes mobile phone and other means of communication and obtaining information without the permission of the teacher, engage in third-party activities, distract other students. When writing different types of works, the student must adhere to the rules of academic integrity.

The teacher must adhere to the implementation of the educational and thematic plan, objectively evaluate the knowledge and skills of students. During the educational process, the teacher should remember about anti-corruption measures and not conduct corruption activities.

13

Policy on skipping classes and completing tasks after the deadline

The student, who, for good reasons, confirmed documented, was not subject to the current control of the masses the right to undergo current control within two weeks after returning to study.

A student who was absent from classes without good reason, did not participate in current control measures, did not eliminate academic debt, is not allowed to final semester control of knowledge in this discipline, and on the day of passing the exam in the examination information, the scientific and pedagogical staff is assessed "unacceptable". Re-preparation of a differentiated test in the discipline is appointed subject to the implementation of all types of educational, independent (individual) work provided for by the working curriculum of the discipline and is carried out in accordance with the schedule of liquidation of academic debt approved by the Director.

QR Code: https://ieu.edu.ua/docs/050.pdf

14

Academic Integrity Policy

Participants of the educational process are guided by the principles of academic integrity

QR Code: https://ieu.edu.ua/docs/050.pdf





15

Recommended sources of information

Basic

- 1. Human anatomy in three volumes / AS Golovatsky, VG Cherkasova, MR Sapin, JI Fedonyuk. Vinnytsia: New book, 2006,2007,2008.
- 2. Human anatomy. In three volumes / Ed. VG Koveshnikov. Luhansk: Shiko Publishing House, Virtual Reality LLC, 2005. 328 p.
- 3. Human anatomy. In two parts. / Ed. KA Dubenko. K: CJSC "Atlant-UMS", 2004. 689 p.
- 4. Dubenko KA Anatomical terminology / KA Dubenko. K .: Polygraph. Book, 2001. 392 p.
- 5. Dubenko KA International anatomical nomenclature / KA Dubenko. К .: Перун, 1997. 143 с.
- 6. Mateshuk-Vatseba LR Normal anatomy / LR Mateshuk-Vatseba. Lviv .: Call of conscience, 1997. 269 p.
- 7. International anatomical terminology (Latin, Ukrainian, Russian and English equivalents) / VG Cherkasov, II Bobrik, YY Guminsky, OI Kovalchuk. Vinnytsia: NovaKnyha, 2010. 392p.
- 8. International Anatomical Nomenclature / Ed. II Bobrik, VG Koveshnikov. Kyiv: Health, 2001. 328p.
- 9. Netlyukh MA Ukrainian-Latin anatomical dictionary / MA Netlyukh. Lviv, 2000. 215 p.
- 10. Sviridov OI Human anatomy / OI Sviridov. Kyiv: Health, 2000. 400 p.
- 11. Sinelnikov RD Atlas of human anatomy. In 4 volumes / RD Sinelnikov. M.: Medicine, 2004.
- 12. Friedrich Paulsen. Sobotta. Atlas der Anatomie des Menschen / Friedrich Paulsen, Jens Waschke. München: Urban & Fischer, 2011. 416 S.
- 13. Netter F. H. Atlas of Human Anatomy. Ciba-geigy limited / F. H. Netter. Switzerland, 1991. 514 p.
- 14. Rauber-Kopsch. Lehrbuch und atlas der anatomie des menshen / Rauber-Kopsch. Bend I. Leipzig, $1940.-500~\mathrm{S}.$

Auxiliary

- 1. Vilkhovoy VF X-ray anatomical atlas of vessels / VF Vilkhovoy. Kiev: Health, 1975. 141 p.
- 2. Tonkov VN Textbook of normal human anatomy / VN Tonkov, ed. BA DolgoSaburova. L., Medgiz, 1962. 763 p.
- 3. Fick VB Introduction to radiology. X-ray anatomy of bones and their connections / VB Fik // Methodical development for teachers and students. Lviv, 2002. 26 p.
- 4. Fiskova LB Methodical recommendations for independent work of students in the study of the musculoskeletal system. Part 1. Osteology. View. 2nd, reworked, ext. / LB Fiskova, LR MateshukVatseba. LSMU, Lviv, 1998. 64 p.
- 5. Prives MG Human Anatomy / MG Prives, NK Lysenkov, VI Bushkevich. Hippocrates, St. Petersburg: Publishing House of St. Petersburg MAPO, 2004. 720 p.

Information resources

- 1. Testing center database of licensed test tasks Step 1 http://testcentr.org.ua/
- 2. OMIM (Online Mendelian Inheritance in Man) An Online Catalog of Human Genes and Genetic Disorders http://omim.org/

16

Tips for successful training on the course

If you want to be successful in this discipline, then you must:

- 1. Be active, persistent, inquisitive, consistent
- 2. Be tidy and polite
- 3. Systematically prepare for practical classes
- 4. Perform tasks for independent work and protect them in the classroom.
- 5. Attend the class in a medical gown
- 6. Independently solve tests and tasks, actively work in the classroom.
- 7. Prepare presentations and crossword puzzles in the discipline. Participate in student scientific conferences and engage in research work in scientific circles of the department.

I wish you perseverance, dedication and motivation to study and thensuccess will come to you! Don't forget your medical gowns!