

**MINISTRY OF HEALTH PROTECTION OF UKRAINE**  
**ODESSA NATIONAL MEDICAL UNIVERSITY**  
 Medical (international) faculty  
 Department of Human Anatomy

**SYLLABUS OF ACADEMIC DISCIPLINE**

**"Basics of primary surgical technique and emergency surgical care in the practice of a surgical and internal medicine doctor"**

Amount	Medical faculty - 90 hours / 3.0 credits Applicants: III year V semester
Days, time, location	Monday-Friday 8.30 to 16.00 according to the schedule, Department of Human Anatomy. During distance learning, education is carried out on the Microsoft Teams platform.
Teachers	<ol style="list-style-type: none"> <li>1. Appelhans Olena - Head of the Department, Doctor of Medicine, Professor.</li> <li>2. Koshelnyk Olena -Associate Professor, PhD.</li> <li>3. Antsut Olga - Senior Teacher, Head Teacher of the Department</li> <li>4. Antonova Natalya - Senior Teacher, Head of the Museum of Human Anatomy</li> <li>5. Kuznetsova Olena - Senior Tteacher</li> <li>6. Chebotaryova Svitlana - Senior Teacher</li> <li>7. Ursu Alexandr - Senior Teacher</li> </ol>
Contact numbers	<p style="text-align: center;">Phone information:</p> <ol style="list-style-type: none"> <li>1. Appelhans Olena           0674842052</li> <li>2. Koshelnyk Olena         0679905679</li> <li>3. Ancut Olga                 050-4561236</li> <li>4. Antonova Natalya        0633547515</li> <li>5. Kuznetsova Olena         0632979525</li> <li>6. Chebotaryova Svetlana  0674838985</li> <li>7. Ursu Alexandr             097-1677773</li> </ol> <p>E-mail: <a href="mailto:anatomy@onmedu.edu.ua">anatomy@onmedu.edu.ua</a></p> <p>Consultations are conducted by the duty teacher according to the schedule of duties; Tuesday and Thursday - 14.30 - 17.30. (For the period of military situation – on Teams platform from 14.30 - 16.30 in group "Practice - human anatomy and clinical</p>

	anatomy")
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## COMMUNICATION

Communication with applicants will be carry out in the classroom. During distance education, communication is carried out on the Microsoft Teams platform, through e-mail correspondence [anatomy@onmedu.edu.ua](mailto:anatomy@onmedu.edu.ua), Viber and Telegram messengers.

## COURSE ANNOTATION

**Subject of study:** Basics of primary surgical technique and emergency surgical care in the practice of a surgical and internal medicine doctor.

**Prerequisites.** The educational discipline "Basics of primary surgical technique and emergency surgical care in the practice of a surgical and internal medicine doctor" is based on applicant's knowledge of medical biology, human anatomy, histology, physiology, biophysics, biochemistry, Latin language, foreign language (for professional direction), medical terminology, ethics, philosophy and is integrated with these disciplines.

**Postrequisites.** Mastering the discipline lays the foundations for applicants to study clinical disciplines of therapeutic and surgical profile - surgery, neurosurgery, anaesthesiology and intensive care, obstetrics and gynaecology and other disciplines where surgical methods of treatment are used, which involves the integration of teaching with these disciplines and the development of skills to apply knowledge in the process of further education and professional activity.

### **The aim of the discipline:**

Acquisition of competencies and practical skills in primary surgical techniques and emergency surgical care by each student, justification of their knowledge of clinical anatomy to select the most rational methods of surgical interventions and provide timely first medical aid in extreme conditions.

### **The objectives of the discipline:**

- the ability to interpret topographo-anatomical relationships from the standpoint of variation and age-related clinical anatomy;
- development of skills to apply knowledge of clinical anatomy to justify primary surgical procedures and emergency medical care;
- development of skills to choose the most rational methods of surgical interventions;
- study of primary surgical techniques;
- mastering the technique of basic surgical techniques and manipulations.

## **Expected results**

As a result of the study of the discipline the applicant should:

### *Know:*

- clinical anatomy of different regions of the human body to justify methods of surgical interventions, performing primary surgical procedures and emergency surgical care;
- technique for using of surgical instruments;
- general stages of instrumental interventions and manipulations.

### *Be able to:*

- use knowledge of clinical anatomy to justify primary surgical procedures;
- use knowledge of clinical anatomy to select methods of emergency surgical care and methods of control of bleeding;
- use surgical instruments for surgical procedures;
- master and demonstrate the technique of dissection and connection of tissues and the place of different types of sutures and knots on biological materials, cadavers and simulators;
- know and demonstrate the basic methods of control of bleeding and ligation of blood vessels;
- master and demonstrate the technique of debridement of the short of wounds in various regions of the body.

## **COURSE DESCRIPTION**

The course will be presented in the form of practical classes (30 hours) and organization of independent work (60 hours).

### *Teaching methods:*

- verbal (answer, explanation, conversation, solving clinical situational tasks, work with a book);
- visual (drawing, demonstration, illustration);
- practical (development of practical skills, correct use of surgical instruments).

On practical classes: answering, explaining, talking, working with a text book, solving situational tasks, demonstrating and practicing practical skills according to

the list on simulation models and in a special classroom equipped as an operating room, correct use of surgical instruments.

**Forms of independent work:** theoretical preparation for the next practical lesson, study of basic and additional literature, lecture texts, watching educational videos, solving thematic test, tasks, mastering of practical skills, writing literature reviews, abstracts and presentations on specific topics of the educational material using additional educational and scientific literature, identification of anatomical structures on topographo-anatomical illustrations; production of visual teaching aids (tables, models, operation diagrams, etc.).

### **Content of the discipline**

**Topic 1:** Surgical instruments. Division into groups. Rules for the practical use of instruments.

**Topic 2.** Types of sutures. Knots. Modern suture material and sewing medical equipment. Developing practical skills in making different types of stitches and knotting.

**Topic 3.** Principles of dissection and connection of the tissues. Principles of debridement of the short wound. Methods of temporary and permanent control of bleeding. Rules of tourniquet application.

**Topic 4.** Local anaesthesia. Infiltration anaesthesia according to Vishnevsky, the rules of performance and features of this type of anaesthesia. Conduction anaesthesia (on the example of anaesthesia for opening purulent processes on the fingers and palm).

**Topic 5.** Clinical anatomy of the regions of cranial foramen. Features of control of bleeding and debridement of the short wounds. Penetrating and non-penetrating wounds of the skull.

**Topic 6.** Clinical anatomy of the neck. Practical use of external neck landmarks. Topography of neurovascular bundles. Features of control of bleeding and debridement of the short wound in neck injuries.

**Topic 7.** Emergency medical care in case of asphyxia. Features of performance in children. Complications.

**Topic 8.** Clinical anatomy of the thoracic cavity. Pleural puncture. Penetrating, non-penetrating wounds of the chest. Suturing of lung wounds. The concept of pneumothorax. Rules for closing a pneumothorax.

**Topic 9.** Clinical anatomy of the anterolateral abdominal wall. Operative accesses to abdominal organs, their characteristics, advantages and disadvantages. Layered dissection and suturing of the anterior abdominal wall.

**Topic 10.** Revision of the abdominal cavity in case of penetrating abdominal wounds. Resection of the intestine. Intestinal sutures. Intestinal anastomoses.

**Topic 11.** Rules of suturing the parenchymal organs of the abdominal cavity and retroperitoneal space during surgery or in case of their injuries (liver, spleen, kidneys).

**Topic 12.** Ascites: etiology and pathogenesis. Abdominal puncture in ascites. Puncture and catheterization of urinary bladder. Puncture of the posterior vaginal fornix in ectopic pregnancy.

**Topic 13.** Clinical anatomy of the extremities. Features of blood supply. Projection lines and opening of neurovascular bundles and rules for ligation of vessels to stop bleeding. Venipuncture and catheterisation of the great vessels of the upper and lower extremities. Vascular sutures.

**Topic 14.** Operations on bones and joints of the extremities. Osteotomy, osteosynthesis. Amputations of the limbs. Three-moment cone-circular and bone-plastic hip amputation according to Pirogov.

**Topic 15.** Credit

### **List of recommended literature**

#### *Basic:*

1. Koshelnyk E.L. Basics of clinical anatomy and operative surgery: study guide for students / E.L.Koshelnyk, A.G.Popov. – Odessa: Odessa State Medical University, 2019. – 103 p.
2. Clinical anatomy and operative surgery: text book/Slobodyan A., Kostyuk G., Yershov V., Psvtorak V.; edited by Yershov V.- Kyiv: AUS Medicine Publishing, 2018.-514 p.
3. Tsyhykalo O. V. Topographical anatomy and operative surgery [Text]: textbook for english-speaking foreign students of higher educational institutions of III-IV levels of accreditation /O.V. Tsyhykalo, 3<sup>rd</sup> edition, 2018. - 524 c.

#### *Additional:*

1. Snell Richard S. Clinical Anatomy by Regions / R. S. Snell, 10<sup>th</sup> edition, 2018. - 816 p.
2. John T. Hansen. Netter's Clinical Anatomy / John T. Hansen, 3<sup>rd</sup> edition, 2014. - 546 p.: ill.
3. Farquharson's Textbook of Operative General Surgery: text book/Farguharson M., Hollingshead J., Moran B., 3<sup>rd</sup> edition , 2014. -560 p.
4. Gvalani AK. Manual of Instruments and Operative Surgery. - Paperback – 2016. – 995 p.

5. E.C. Ellison. Zollinger's Atlas of Surgical Operations / R.M. Zollinger, E.C. Ellison. - 10th ed. - McGraw-Hill, 2016. - 514 p.
6. Mulholland Michael W. Operative Techniques in Surgery/ Mulholland Michael W., Albo Daniel, 2014. – 1433 p.

### Electronic resources

1. <https://info.odmu.edu.ua/chair/anatomy/files/109/en> - materials from the course "Clinical Anatomy and Operative Surgery"
2. <https://webop.com> – online reference book and e-book on surgical operations.
3. <https://www.primalpictures.com>. – 3D anatomy resource for teachers, students, practitioners and professionals
4. <https://www.visiblebody.com> - resource of the international educational community "Visible Body"
5. <https://3d4medical.com> - the world's most advanced 3D anatomy platform

**Independent work of applicant:** The content of independent work is determined by the working curriculum of the discipline and methodical recommendations of the teacher. Applicants are also recommended for independent study of relevant scientific literature and periodicals. Methodical support of independent work of applicant provides means of self-control (tests, a package of control tasks).

### Evaluation

*Current success.* Forms and methods of current control are carried out during classes and are aimed at checking applicant' assimilation of educational material, the level of theoretical and practical training. Forms of control - survey, conversation, report, testing, solving situational problems, solving a clinical situational problem, demonstration of practical skills or abilities. Forms for evaluation of current educational activities are standardized and correspond to standards of answers. Evaluation of the success of studying each topic of the discipline is carried out according to a traditional 4-point scale.

#### Current assessment criteria for practical training

«5»	The applicant mastered the theoretical material flawlessly, demonstrates deep and comprehensive knowledge of the topic, the main provisions of scientific primary sources and recommended literature, freely uses the acquired theoretical knowledge when analyzing practical material, expresses his attitude to certain problems, demonstrates a high level of mastery of practical skills.
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«4»	The applicant has mastered the theoretical material well, has the main aspects from primary sources and recommended literature, presents it in a reasoned way; has practical skills, expresses his thoughts on certain problems, but certain inaccuracies and errors are assumed in the logic of the presentation of theoretical content or in the analysis of practical ones.
«3»	The applicant has mainly mastered the theoretical knowledge of the educational topic, orients himself in the primary sources and recommended literature, but answers unconvincingly, confuses concepts, additional questions cause the applicant insecurity or lack of stable knowledge; when answering questions of a practical nature, reveals inaccuracies in knowledge, does not know how to evaluate facts and phenomena, connect them with future activities.
«2»	The applicant has not mastered the educational material of the topic, does not know scientific facts, definitions, hardly orients himself in primary sources and recommended literature, lacks scientific thinking, practical skills are not formed.

**Form and methods of final control: credit.**

A credit is given to student who has completed all sections of the elective discipline's curriculum, has no academic debt, has a current average grade of at least 3.0 and at least a "satisfactory" grade for the final class.

**COURSE POLICY**

The policy of the academic discipline complies 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 Relationships of the University Community of the Odessa National Medical University, the Regulations on the Prevention and Detection of Academic Sciences of Higher Education Applicants, Researchers and teachers of Odessa National Medical University

**Discipline requirements:** mandatory attendance of classes, active participation in discussions, preliminary preparation for classes with textbooks and basic literature, quality and timely performance of tasks for independent work, participation in all types of control.

**Observance of academic integrity** involves: independent performance of all types of work, tasks, forms of control provided for by the work program of this academic discipline; references to sources of information in the case of using ideas, developments, statements, information; compliance with the legislation on copyright

and related rights; provision of reliable information about the results of one's own educational (scientific) activity, used research methods and sources of information.

Unacceptable in educational activities for participants of the educational process are: using family or official ties to obtain a positive or higher grade during any form of control of learning outcomes or academic performance; use of prohibited auxiliary materials or technical means (cheat sheets, notes, micro-earphones, telephones, smartphones, tablets, etc.) during control measures; passing procedures for control of training results by fake persons.

For violation of academic integrity, students may be held to the following academic responsibility: a decrease in the results of assessment of control work, assessment in class, credit, etc.; retaking the assessment (control work, credit, etc.); appointment of additional control measures (additional individual tasks, control works, tests, etc.); conducting an additional inspection of other works authored by the violator.

**Mobile devices:** Before the lesson begins, the applicant should turn off the sound in the mobile phone and other devices that can play it. This is an international rule of etiquette that applies to the educational process. It is not allowed to use them during the lessons, for purposes that are not related to or disrupt the learning process. Attempting to talk during class is considered a gross violation of ethical rules of conduct.

**Behavior in the audience:** applicants must monitor their appearance, monitor their speech, to avoid the use of obscene words. Familiarity, rudeness, disrespect in communication with the interlocutor, indecent behavior in any form are inadmissible. It is strictly forbidden to use narcotic and toxic drugs. It is not allowed to use alcoholic and low-alcohol beverages or to be in a condition, which is conditioned by it, at any time on the territory of the university. Takes care of the material and technical base and educational literature of the university.