


# National Pirogov Memorial Medical University, Vinnytsya

Department of Clinical Anatomy and Operative Surgery

**"I APPROVE"**

Vice-rector for scientific and pedagogical  
(educational) work

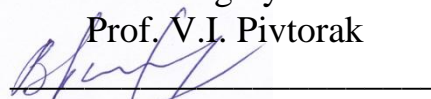
Prof. O. A. Serebrennikova

  
"31" August 2022

**"I AGREE"**

Head of clinical anatomy and operative  
surgery

Prof. V.I. Pivtorak

  
"29" August 2022

## SYLLABUS

### EDUCATIONAL DISCIPLINE

**"Clinical Anatomy"**

Specialty	222 Medicine
Educational level	Master's degree
Educational program	OPP "Medicine", 2022
Academic year	2022-2023
Chair	clinical anatomy and operative surgery
Lecturer	professor, doctor of medicine Pivtorak V.I.
Contact Information	opersurgery @ vnmU.edu.ua PyrogoVa St., 56, (morphology building)
Compiler of the syllabus	Ph.D., associate professor Burkov M.V.

### 1. Status and structure of the discipline

Discipline status	Mandatory
Code of discipline in OPP and place of discipline in OPP	OK 25, a component of the cycle of professional training disciplines
Course/semester	2nd year (IV semester)
Scope of the discipline (total number of hours/ number of ECTS credits)	90 hours / 3 ECTS credits
The structure of the discipline	Lectures - 10 hours Practical classes - 30 hours Independent work - 50 hours In general: classroom classes - 44.5 %, independent extracurricular work - 55.5 %
Number of content modules	5
Language of teaching	Ukrainian
Form of education	Full-time (when implementing quarantine measures - remote full-time)

### 2. Description of the discipline

**Short abstract of the course, relevance.** The main focus of the program is the acquisition of knowledge from the mandatory discipline of professional training "Clinical Anatomy", the study of which is necessary for the successful mastery of a number of clinical disciplines. Clinical anatomy is a discipline necessary for doctors, as it forms in the future doctor an understanding of the mutual arrangement of organs, the projection of vessels and nerves in different areas, which is necessary for practicing doctors. Based on the study of clinical anatomy, presentation of clinical cases, students begin to develop clinical thinking. Also, students gain knowledge about the technique of performing operations on various organs, some of these operations are performed by students on cadaver material or on laboratory animals. The study of clinical anatomy is necessary for further study of both surgical and therapeutic disciplines.

**Prerequisites .** In order to successfully master the discipline, the student needs the knowledge obtained in the course of studying the following disciplines of general training: human anatomy, histology, cytology and embryology, normal physiology, Latin, history of medicine.

**The purpose of the course and its importance for professional activity.** The purpose of studying an academic discipline "Clinical anatomy" is to be able to determine holotopia, skeletotopia, syntopy of human organs; interpret clinical-anatomical relationships from the positions of variational and age-related clinical anatomy.

**Post-requisites .** In the process of studying the discipline, the knowledge necessary for the successful assimilation of other disciplines of professional training is acquired, namely: general surgery, vascular surgery, neurosurgery, children's surgery, ENT, urology, oncology.

### 3. Learning outcomes of the discipline :

- *to know:* the clinical anatomy of various organs and systems, to know the theoretical foundations of the technique of performing various surgical manipulations and surgical interventions;
- *be able:* to be able to determine holotopia, skeletotopia and syntopy of human organs; interpret clinical-anatomical relationships from the positions of variational and age-related clinical anatomy;

#### 4. Content and logistics of the discipline

<b>MODULE #1:</b> Clinical anatomy of the head, neck, areas and organs of the chest cavity, areas and organs of the abdominal cavity. Clinical anatomy of the spine, lumbar region, retroperitoneal space, pelvis and limbs.	4th semester 90 hours 3 credits	Lectures No. 1-5 Practical lessons No. 1-15 The student's independent work involves preparation for practical classes No. 1-15 and development of practical skills.
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The discipline includes 25 topics, which are divided into 2 thematic modules.

##### Module 1

##### **Content module 1. Introduction to clinical anatomy and operative surgery. Clinical anatomy and operative surgery of the head and neck.**

- Topic 1 Clinical anatomy of the cerebral part of the head. Clinical anatomy of the internal base of the skull. Clinical anatomy of skull caps. Clinical anatomy of the meninges and venous sinuses of the dura mater.
- Topic 2 Clinical anatomy of the facial part of the head. Lateral part of the face.
- Topic 3 Clinical anatomy of the neck. Borders, external landmarks, sections, triangles of the neck. Fasciae, fibrous spaces. Clinical anatomy of neck organs. Peculiarities in children.

##### **Content module 2. Clinical anatomy and operative surgery of areas and organs of the chest cavity.**

- Topic 4 Clinical anatomy of the chest wall. Layers. Mammary gland. Pleura. Lungs. Diaphragm.
- Topic 5 Clinical anatomy of the chest cavity: innervation, blood supply, lymphatic drainage. Anterior and posterior mediastinum. Clinical anatomy of the heart and pericardium.

##### **Content module 3. Clinical anatomy and operative surgery of areas and organs of the abdominal cavity.**

- Topic 6 Clinical anatomy and operative surgery of the anterolateral abdominal wall. Clinical anatomy of the inguinal area.
- Topic 7 Clinical anatomy of the abdominal cavity. Peritoneum, its relation to abdominal organs. Bags channels, nooks and crannies of the peritoneum. Clinical anatomy of the stomach. Clinical anatomy of the liver and gall bladder. Clinical anatomy of the small intestine. Clinical anatomy of the colon. Clinical anatomy of the pancreas. Clinical anatomy of the spleen.

##### **Content module 4. Clinical anatomy and operative surgery of the spine, lumbar region, peritoneal space and pelvis.**

- Topic 8 Clinical anatomy and operative surgery of the spine, spinal cord and its membranes. Clinical anatomy of the lumbar region. Layers. Fasciae, fibrous spaces. Lumbar triangle. Clinical anatomy of organs of the retroperitoneal space. Kidneys, adrenal glands, ureters.
- Topic 9 Clinical anatomy of the pelvis. Bone base. The dimensions of the pelvis. Clinical anatomy of fascias, fibrous spaces of the pelvis.
- Topic 10 Clinical anatomy of pelvic organs. Clinical anatomy of male and female perineum.

##### **Content module 5. Clinical anatomy and operative surgery of limbs.**

- Topic 11 Clinical anatomy of the buttock, thigh, knee. Hip joint.
- Topic 12 Clinical anatomy of the lower leg and foot.
- Topic 13 Clinical anatomy of the upper arm, axilla, shoulder, elbow fossa, area of the elbow joint. Clinical anatomy of shoulder and elbow joints.
- Topic 14 Clinical anatomy of the forearm and hand. Fascias and fascial cases. Cellular

spaces.

#### Topic 15 Differentiated scoring.

Topics of the lecture course reveal the problematic issues of the relevant sections of clinical anatomy.

Practical classes involve theoretical substantiation of the main issues of the topic and acquisition of practical skills. In practical classes, students prepare wet preparations.

The student's independent work involves preparation for practical classes and development of practical skills. Control over the independent work of students is carried out during the practical session by oral questioning of the student and demonstration of practical skills by the student.

Thematic plans of lectures, calendar plans of practical classes, volume and directions of individual work are published on the website of the department.

The route of obtaining materials: <https://www.vnmue.edu.ua/> Department of Clinical Anatomy and Operative Surgery. Access to materials is carried out from the student's corporate account.

### 5. Forms and methods of monitoring learning success

Current control in practical classes	Methods: oral or written survey, testing,
Final semester control (credit) at the end of the 4th semester	According to the regulations on the organization of the educational process at M.I.Pyrogov VNMU ( link <a href="https://www.vnmue.edu.ua/">https://www.vnmue.edu.ua/</a> (General information/Main documents)
The final control of the discipline is differential test	Methods: testing, oral survey (according to the regulations on the organization of the educational process at M.I.Pyrogov VNMU ( link <a href="https://www.vnmue.edu.ua/">https://www.vnmue.edu.ua/</a> (General information/Main documents)
Means of diagnostics of learning success	Theoretical questions, tests, clinically-oriented situational tasks, practical tasks, demonstration of practical skills

### 6. Evaluation criteria

Knowledge assessment is carried out in accordance with the Regulations on the Organization of the Educational Process at M.I.Pyrogov VNMU ( link <https://www.vnmue.edu.ua/General> information/Main documents)

Current control	According to the four-point system of traditional evaluations: 5 "excellent", 4 "good", 3 "satisfactory", 2 "unsatisfactory"
Control of practical skills	According to the four-point system of traditional evaluations
Test	On a 200-point scale (the average arithmetic grade for the semester is converted into points) Scored: from 122 to 200 points Not counted: less than 122 points ( see Grading scale )
Final control of discipline	Sum of points for testing (up to 20 points) and oral survey (up to 60 points) Exam grade: 71-80 points - "excellent" 61-70 points - "good" 50-60 points - "satisfactory" Less than 50 points - "not satisfactory"/failed
Evaluation of discipline :	Current academic performance - from 72 to 120 points (conversion of the average traditional grade for practical classes on a 120-point scale): 60% of the grade for the

	discipline Final control - from 50 to 80 points: 40% of the grade for the discipline Individual work - from 1 to 12 points Total from 122 to 200 points.
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#### Discipline assessment scale: national and ECTS

The sum of points for all types of educational activities	Rating ECTS	Evaluation on a national scale	
		for an exam, course project (work), practice	for credit
180-200	AND	perfectly	counted
170-179.99	IN	fine	
160-169.99	WITH		
141-159.99	D	satisfactorily	
122-140.99	IS		
0-121.99	FX	unsatisfactory with the possibility of reassembly	not counted with the possibility of retaking
	F	unsatisfactory with mandatory repeated study of the discipline	not enrolled with mandatory repeated study of the discipline

#### Criteria for assessing students' knowledge of the discipline during training.

##### Evaluation criteria for oral response during current control

The grade **"excellent"** is awarded to a student who has deeply and comprehensively mastered the theoretical material and teaches it competently and logically. He clearly answers non-standard questions on the topic of the lesson, knows how to connect the material of this topic with previously studied sections, which indicates mastery of the recommended literature and the ability to analyze the studied material, and also clearly demonstrates the importance of the acquired theoretical knowledge for practical medicine.

The grade **"good"** is awarded to a student who knows and has a good command of the theoretical material, teaches it competently, does not allow inaccuracies in the answer, knows how to reveal the topic from the standpoint of its medical significance and practical application, but at the same time the answers do not go beyond the textbook and methodical recommendations.

The grade **"satisfactory"** is given to a student who knows the basic concepts and definitions of the studied topic, but makes significant inaccuracies or has difficulties in formulating an answer, does not understand the medical aspects of the topic, and cannot connect theoretical material with practice.

An **"unsatisfactory" grade** is given to a student who does not know the theoretical foundations of the topic, makes gross mistakes when answering, does not understand basic concepts and definitions, and cannot explain the meaning of theoretical material for practical medicine.

##### Evaluation of the performance of test tasks during the current control

The grade **"excellent"** is awarded to a student who gives 80-100% correct answers during the test control

The grade **"good"** is given to a student who gives 60-79% correct answers during the test control

A grade of **"satisfactory"** is awarded to a student who gives 50-59% correct answers during the test control

The grade **"unsatisfactory"** is assigned to a student who solves less than 50% of the test tasks correctly during the test survey.

### **Evaluation of performance of practical skills**

The grade **"excellent"** is awarded to a student who has an impeccable knowledge of the theoretical basis of this skill and also has an excellent command of the technique of its implementation.

A grade of **"good"** is assigned to a student who has the theoretical basis of this skill and also has a sufficiently good command of the technique of its implementation.

A grade of **"satisfactory"** is given to a student who has a mediocre knowledge of the theoretical basis of this skill and makes mistakes in its implementation.

An **"unsatisfactory" grade** is assigned to a student who does not have sufficient knowledge or does not possess the theoretical basis of a given skill and cannot perform it.

### **Independent work of student**

Control of students' independent work is carried out during the practical session according to the same criteria as the current control.

### **Individual work**

It is carried out on the basis of the performance of individual tasks, scientific and practical work, a report on the results of research at a student scientific circle, a conference, participation in a competition of student scientific works, Olympiads in the discipline.

The calculation of individual points is carried out on the basis of the Regulation on the organization of the educational process at the M.I. Pirogov Vinnytsia National Medical University ( Vinnytsia , 2020). (link <https://www.vnmu.edu.ua/> General information/Main documents)

### **Criteria for assessing students' knowledge of the discipline during differentiated assessment.**

A student who has completely mastered the program of the discipline, has no missed or unworked practical classes and lectures, and the average score of current grades is higher than or equal to 3.0 has the right to take a differentiated credit in the discipline.

#### **Evaluation criteria of test tasks for differentiated assessment .**

Test tasks for differentiated assessment consist of three components:

1. Practically oriented questions, for the answer to which a student can receive from 0 to 2 points.
2. Situational problems, for the answer to which a student can receive from 0 to 2 points;
3. Test tasks, for the answer to which a student can receive from 0 to 1 point.

In total, a student can get from 0 to 20 points

### **Criteria for evaluating oral answers during differentiated assessment .**

The grade **"excellent"** is awarded to a student who answers the questions on the exam ticket correctly and in a logical sequence. During the answer, demonstrates the ability to analyze the theoretical material, makes thorough conclusions about the value of the theoretical material for practical medicine, provides clear and correct answers to additional non-standard questions, does not require clarifying questions when formulating the answer.

The grade **"good"** is awarded to a student who has a good command of the theoretical material and provides answers to the questions on the exam ticket in a logical sequence, but admits minor inaccuracies, which he quickly corrects when answering the examiner's clarifying questions.

A grade of **"satisfactory"** is awarded to a student who demonstrates knowledge of basic concepts and definitions when answering questions on the exam ticket, makes significant inaccuracies or has difficulty answering questions on the ticket, makes inaccuracies when answering the examiner's clarifying questions .

The grade **"unsatisfactory"** is assigned to a student who does not know the answer to one of the questions on the exam ticket, cannot explain basic concepts and definitions, does not know the answer to the examiner's additional clarifying questions.

## **7. Policy of academic discipline/course**

The student has the right to receive high-quality educational services, access to modern scientific and educational information, qualified advisory assistance during the study of the discipline and mastery of practical skills. The policy of the department during the provision of educational services is student -centered, based on the normative documents of the Ministry of Education and the Ministry of Health of Ukraine, the university charter and the procedure for providing educational services, regulated by the basic provisions of the organization of the educational process at M.I. Pirogov VNMU and the principles of academic integrity

**Compliance with the rules of the VNMU routine, safety techniques** at practical classes. Instruction on safety techniques, rules for handling surgical instruments, with a wet preparation is conducted by the teacher at the first practical session. Conducting the briefing is registered in the Journal of briefing on safety techniques. A student who has not been instructed is not allowed to perform practical work.

**Requirements for preparation for practical classes.** The student must be prepared for the practical session, the test tasks for the current topic must be solved.

You should come to class on time, without being late. A student who is more than 10 minutes late for class is not allowed to attend the last class and must complete it in the prescribed manner.

During practical classes, the student must be dressed in work uniform (medical gown, cap). Students who do not have a working uniform are not allowed to attend classes.

The student must observe safety rules during practical classes and during his stay in the premises of the department.

During the discussion of theoretical issues, students should demonstrate tolerance, courtesy and respect for their colleagues and the teacher; when performing practical tasks, the workplace must be kept in order and cleaned after performing practical work.

**Use of mobile phones and other electronic devices** . The use of mobile phones and other electronic devices in the class is allowed only with the permission of the teacher and exclusively for searching information.

**Academic integrity.** While studying the discipline, the student must be guided by the Code of Academic Integrity of the M.I.Pyrogov VNMU ( <https://www.vnmue.edu.ua/> [General information/](#) Main documents/ Code of Academic Integrity). If the norms of academic integrity are violated during the current and final examinations, the student receives a grade of "2" and must work it out to his teacher in the prescribed manner within two weeks after receiving an unsatisfactory grade.

**Skipping classes.** Missed classes are made up according to the procedure established in the Regulation on the organization of the educational process at M.I.Pyrogov VNMU ( [link https://www.vnmue.edu.ua/](https://www.vnmue.edu.ua/) General information/Basic documents) at the time specified by the schedule of exercises (published on the website of the department <https://www.vnmue.edu.ua/> department of clinical anatomy and operative surgery) to a regular teacher. In order to make up for the missed lesson, the student must orally answer questions related to the topic of the lesson. Workup of missed lectures is carried out after providing a synopsis of the lecture material, or writing an abstract, or preparing one's own presentation on the topic of the missed lecture.

**The procedure for admission to the final** discipline control is given in the Regulation on the organization of the educational process at M.I. Pirogov VNMU ( [link https://www.vnmue.edu.ua/](https://www.vnmue.edu.ua/) General information/Basic documents). Students who have not missed unworked practical classes and lectures and have received an average traditional grade of at least "3" are admitted to the final examination.

**Additional individual points.** A student can receive individual points from a discipline for individual work, the scope of which is published on the department's website in the teaching and methodical materials of the discipline, the number of points is determined based on the results of the IRS according to the Regulations on the Organization of the Educational Process at M.I.Pyrogov VNMU ( [link https://www.vnmue.edu.ua/](https://www.vnmue.edu.ua/) General information/Main documents).



**Resolution of conflict issues.** In the event of misunderstandings and claims against the teacher due to the quality of educational services, knowledge assessment and other conflict situations, the student must first notify the teacher of his/her claims. If the conflict issue is not resolved, then the student has the right to submit an appeal to the head of the department in accordance with the Regulation on consideration of appeals by applicants for higher education at M.I.Pyrogov VNMU ( <https://www.vnmu.edu.ua/> [General](#) information/ Main documents ).

**Policy in the conditions of distance learning.** The distance learning procedure is regulated by the Regulation on the introduction of elements of distance learning at M.I.Pyrogov VNMU ( <https://www.vnmu.edu.ua/> [General](#) information/ Basic documents). The main educational platforms for conducting training sessions are Microsoft Team , Google Meets . The procedure for conducting practical classes and lectures, exercises and consultations during distance learning is published on the website of the department ( <https://www.vnmu.edu.ua/> Department of Clinical Anatomy and Operative Surgery/ To the Student).

**Feedback** from the teacher is carried out through messengers ( Viber , Telegram , WhatsApp ) or e-mail (at the choice of the teacher) during working hours.

## 8. Educational resources

Educational and methodological support of the discipline is published on the website of the department. The route of obtaining materials <https://www.vnmu.edu.ua/> Department of clinical anatomy and operative surgery / To the student.

### The main one

1. Clinical anatomy of genitourinary organs. Manual. / V.I. Horovy, V.O. Shaprynskyi , B.F. Mazorchuk, O.I. Yatsyna , V. I. Pivtorak and others. - Vinnytsia: Nilan-LTD , 2016. – 640 p. ISBN 978-966-924-362-1
2. Operative surgery and clinical anatomy / M.S. Skrypnikov , A.M. Bilych , V.I. Shepitko and others; Under the editorship M.S. Skrypnikova — K.: Higher school, 2000.— 501 p.
3. Operative surgery and topographical anatomy of the head and neck: textbook/ V.I. Pivtorak, O.M. Pronina, Yu.M. Wolf [etc.]; under the editorship professors: V.I. Pivtoraka, O.M. Pronina - Vinnytsia: New Book, 2016. - 312 p. ISBN 978-966-382-586-1
4. Operative surgery and clinical anatomy: Educational and methodological guide. Practical training. For medical faculties / Kovalskyi M.P., Kostyuk G.Ya., Pivtorak V.I., Kobzar O.B., Gunko P.M. – Vinnytsia: PP "Publishing". "Thesis" , 2004. - 310 p.
5. Operative surgery and topographic anatomy / Yu.T. Akhtemiichuk , Yu.M. Vovk, S.V. Doroshenko, O.B. Kobzar, M.P. Kovalskyi, I.L. Pervak, V.I. Pivtorak, K.O. Prokopets , N.Yu. Radomska . - K.: Medicine, 2018. - 504 p. **ISBN: 978-617-505-619-6**
6. Operative surgery: surgical operations and manipulations / I.U. Svistonyuk , V.P. Pishak, M.D. Lutyk , Yu.T. Akhtemiichuk . - K.: Health, - 2001. - 368p.
7. Pivtorak V. I., Bulko M. P. Clinical anatomy of the trigeminal and facial nerves. Vegetative nodes of the face. Local anesthesia: [ ed . help \_ for studies \_ higher \_ honey. teach \_ closed .] / - Vinnytsia: Nova Kniga, 2012. - 135 p. - ISBN 978-966-382-439-0
8. Pivtorak, V. I., Voloshyn, M. A., Grigor'eva, O. A., Shevchuk, Y. G., Bulko, M. P., Kostyuk, V. G., & Fomin O. O. - Vinnytsia: Nova Kniga, 2019. - 152 p. Clinical anatomy of the lower limb. (manual) ISBN 978-966-382-742-1
9. Pivtorak, V. I., Kobzar, O. B., & Shevchuk, Y. G. A short course in clinical anatomy and operative surgery. (manual) - Vinnytsia: Nova Kniga, 2019. - 224 p. ISBN 978-966-382-757-5
10. Pivtorak, V. I., Kobzar, O. B., & Shevchuk, Y. G. Short course of topographic anatomy and operative surgery: study guide - Vinnytsia: Nova Kniga, 2015. - 224 p. fig., tab. ISBN 978-966-382-569-4
11. Pivtorak, V. I., Kobzar, O. B., Bulko, M. P., & Kostyuk, V. G. (2017). Clinical anatomy of the upper limb. (manual) - Vinnytsia: Nova kniga, 2017. - 158 p. ISBN 978-966-382-660-8



12. Sergienko V.Y., Petrosyan E.A., Frauchi I.V. Topographical anatomy and operative surgery: In 2 volumes / Pod obsch . ed . Acad. Yu.M. Lopukhina RAMS. - M.: GEOTAR-MED. 2001. - T.2. - 832 p.
13. V.Y. , Petrosyan E.A., Frauchi I.V. , Topograficheskaya anatomy and operative surgery : In 2 volumes / Sub Society \_ ed. Acad. RAMS Yu.M. Lopukhina . - M.: GEOTAR-MED. 2001. - T.1. - 832 p.

#### **Additional**

1. Bolshakov O.P., Semenov H.M. Operative surgery and topographical anatomy: workshop. - St. Petersburg: Peter. 2001. - 880 p.
2. Clinical anatomy and operative surgery / Tatyanchenko V.K., Ovsiyannikov A.V., Kogan M.I. etc. Ed. V.K. Tatyanchenko - Rostov n / D: "Fenix" publishing house, 2000. - 640 p .
3. Clinical anatomy and operative surgery of purulent-inflammatory processes of the head and neck / Toporov G.M., Skrypnikov M.S., Pronina O.M., Danylchenko S.I. Edited by M.S. Skrypnikova . Educational and methodological manual for students of stomatological faculties of medical universities and dental interns. - Poltava: Verstka, 2002. - 100 p.
4. International anatomical nomenclature. - K.: Health, 2001. - 328 p.
5. Topographic -anatomical substantiation of angiosomal plastic surgery autoplastics on the head and neck / Skrypnikov M.S., Sokolov V.M., Avetkov D.S., Danylchenko S.I., Khilko Yu.K., Skrypnikov P.M., Pronina O.M. Edited by M.S. Skrypnikova . A guide for students of stomatological faculties of medical universities and dental interns. - Poltava: Verstka, 2002. - 120 p.
6. Pancreatic surgery / I.E. Verkhuletskyi , T.V. Semenova, V.Yu. Mykhailychenko, E.Yu. Miroshnychenko, I.S. Bomber . - Donetsk "Donechchina", 2002. — 80 p.

#### **Information resources**

1. Website of the department: <http://opersurgery.vnmuedu.ua>
2. Library website: <http://library.vsmu.edu.ua>
3. Ministry of Health of Ukraine <https://moz.gov.ua/>
4. Public Health Center of the Ministry of Health of Ukraine <https://phc.org.ua/kontrol-zakhvoryuvan>
5. National Library of Medicine <https://pubmed.ncbi.nlm.nih.gov>

#### **9. Schedule and distribution of groups by teachers**

Published on the web page of the department (( <https://www.vnmuedu.ua/> Department of Clinical Anatomy and Operative Surgery / To the Student).

#### **10. Questions for intermediate and final discipline controls**

published on the web page of the department ( <https://www.vnmuedu.ua/> Department of Clinical Anatomy and Operative Surgery / To the Student).

The syllabus for the discipline was discussed and approved at the meeting of the Department of Clinical Anatomy and Operative Surgery of the VNMU named after E. Pirogov  
Protocol No. 7 of 29 August 2022

Head of the department



prof. V.I. Pivtorak

Compiler



Assoc. M. V. Burkov