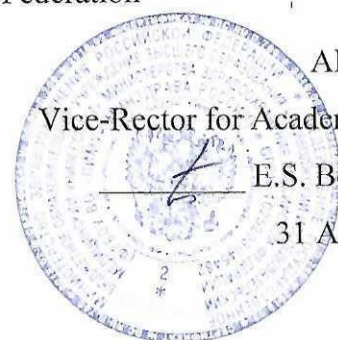


Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation



APPROVED

Vice-Rector for Academic Affairs

E.S. Bogomolova

31 August 2021

WORKING PROGRAM

Name of the academic discipline: **TOPOGRAPHIC ANATOMY AND OPERATIVE SURGERY**

Specialty: - **31.05.01 GENERAL MEDICINE**
(code, name)

Qualification: - **GENERAL PRACTITIONER**

Department: - **GENERAL, OPERATIVE SURGERY AND TOPOGRAPHIC ANATOMY named after A.I. KOZHEVNIKOV**

Mode of study: - **FULL-TIME**

Labor intensity of the academic discipline: **180 academic hours**

Nizhny Novgorod
2021

The working program has been developed in accordance with the Federal State Educational Standard for the specialty 31.05.01 GENERAL MEDICINE, approved by Order of the Ministry of Science and Higher Education of the Russian Federation No. 988 of August 12, 2020.

Developers of the working program:


Gorbunova L.I., teacher of the Department of General, Operative Surgery and Topographic Anatomy named after A.I. Kozhevnikov.

The program was reviewed and approved at the department meeting (protocol No. 01 June 2021)

Head of the Department, Professor, MD.  (Bazaev A.V.)
(signature)

"04" June_2021

AGREED

Deputy Head of EMA ph.d. of biology  Lovtsova L.V.
(signature)

"04" June_2021

1. The purpose and objectives of mastering the academic discipline «Topographic anatomy and operative surgery» (hereinafter – the discipline):

1.1. The purpose of mastering the discipline: *participation in forming the relevant competencies* among students: UC -1; GPC -4; GPC -5; GPC -10; PC-3; PC-7.

1.2. Tasks of the discipline:

1. The learning process also aims at the comprehensive education of the personality of the future doctor, his aesthetic and deontological education. It is aimed at continuing the best humanistic traditions of medicine.

1.3. Requirements to the deliverables of mastering the discipline

As a result of completing the discipline, the student should

Know:

1. the general principle of the layered structure of the human body;
2. topographic anatomy of specific region;
3. clinical anatomy of specific regions;
4. clinical anatomy of internal organs, cellular spaces, neurovascular formations, bones and large joints, weak points of the abdominal wall;
5. collateral circulation in violation of the main blood vessels;
6. areas of motor and sensory innervation by large nerves;
7. age-related features of the structure, shape and position of organs;
8. indications, technique of performing simple emergency surgical interventions: surgical instruments;
9. cervical vagosympathetic blockade according to A.V. Vishnevsky;
10. resection trepanation of the skull;
11. bone-plastic trepanation of the skull;
12. conicotomy;
13. tracheostomy;
14. opening of a breast abscess;
15. suturing of the penetrating wound of the pleural cavity;
16. appendectomy;
17. suturing of the abdominal wall wound;
18. radical mastectomy;
19. suturing of the heart wound;
20. revision of abdominal organs;
21. intestinal resection;
22. formation of gastrointestinal anastomoses;
23. Fred-Ramstedt pyloroplasty;
24. gastric resection according to the Billrot – 1 method;
25. stomach resection according to the Billrot – 2 method;
26. gastric resection according to the method in the modification of the Chamberlain-Finsterer;
27. gastrostomy by Strain and Cader;
28. cholecystectomy;
29. splenectomy;
30. nephrectomy;
31. formation of a gastro-vesicular fistula;
32. liver suture;
33. formation of a bladder fistula;
34. the main stages of limb amputation;

35. operations for ectopic pregnancy disorders;

Be able to:

1. use the knowledge of topographic anatomy;
to substantiate the diagnosis;
to choose rational access;
for the method of surgical intervention;
to prevent intraoperative mistakes and complications caused by age-related topographic anatomical features of the regions;
2. use general and special surgical instruments;
3. perform a conicotomy;
4. perform a tracheostomy
5. perform primary surgical treatment of the wound;
6. perform separate surgical techniques and operations; layer-by-layer separation of soft tissues; skin; subcutaneous tissue; fascia; muscles; parietal peritoneum;
7. suture the skin, muscle wound, parenchymal organs;
8. apply interrupted sutures (simple interrupted, mattress, Lambert suture);
9. apply continuous suture (simple continuous, Schmiedenna suture);
10. remove skin sutures;
11. perform venesection;
12. expose large arteries;
13. stitch a nerve, tendon;
14. tie a blood vessel;
15. perform exarticulation of the phalanges of the fingers of the hand and foot;
16. suture the wound of the stomach and intestines;
17. make an incision to open the panaritium;
18. make an incision to open the phlegmon brush;
19. make an incision to open the phlegmon of the foot;
20. perform a puncture of the shoulder, elbow and knee joints;

Possess:

1. general surgical instruments;
2. skills of layer-by-layer separation of soft tissues; skin; subcutaneous tissue; fascia; muscles;
3. skills to sew up a skin wound in layers;
4. the technique of applying a simple interrupted suture and a continuous suture;
5. the technique of applying knots by hands and with the help of tools (tie a granny knot, square knot, surgical knot);
6. the technique of stopping bleeding in the wound (ligation of the vessel in the wound under the forceps);
7. perform a puncture of the shoulder and knee joints;
8. perform a pleural puncture;

2. Position of the academic discipline in the structure of the General Educational Program of Higher Education (GEP HE) of the organization.

2.1. The discipline "Topographic anatomy and operative surgery" refers to the core part, block B1.B.15 of Block 1 of GEP HE (Academic discipline index).

The discipline is taught in _2_ semesters/ 3 and 4 year of study.

2.2. The following knowledge, skills and abilities formed by previous academic

disciplines are required for mastering the discipline:

- anatomy;
- biology;
- philosophy;
- bioethics;
- psychology and pedagogy;
- history of medicine;
- Latin language;
- medical informatics;
- chemistry;
- biochemistry;
- normal physiology;
- microbiology;
- virology;
- immunology;
- hygiene;
- propaedeutics of internal diseases;
- general surgery;
- radiation diagnostics;
- life safety;
- disaster medicine.
- pathological anatomy;
- pathophysiology.

2.3. Mastering the discipline is required for forming the following knowledge, skills and abilities for subsequent academic disciplines:

- clinical pathological anatomy;
- neurology;
- neurosurgery;
- otorhinolaryngology;
- ophthalmology;
- forensic medicine;
- obstetrics and gynecology;
- pediatrics;
- radiation diagnostics;
- occupational diseases;
- endocrinology;
- hospital therapy;
- faculty therapy;
- polyclinic therapy;
- anesthesiology, intensive care;
- faculty surgery;
- urology;
- hospital surgery;
- pediatric surgery;
- dentistry;
- oncology;
- radiation therapy;
- traumatology, orthopedics.

3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following universal (UC) or/and general professional (GPC) or/and professional (PC) competencies

| № | Competence code | The content of the competence (or its part) | Code and name of the competence acquisition metric | As a result of mastering the discipline, the students should: | | |
|----|-----------------|--|---|---|--|---|
| | | | | know | be able to | possess |
| 1. | UC-1. | Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy. | <p>1.1 Knows: methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis</p> <p>1.2 Able to: gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience</p> <p>1.3 Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems</p> | <p>- methodology of abstract thinking for the systematization of pathological processes, the construction of cause-and-effect relationships ;</p> <p>- principles of analysis of elements of the information received (identified symptoms, syndromes, pathological changes) as a result of examination of the patient on the basis of modern ideas about the relationship of functional systems of the body.</p> | <p>-analyze the symptoms and syndromes identified as a result of the patient's examination;</p> <p>- to identify cause-and-effect relationships of the development of pathological processes for the diagnosis and preparation of the patient's treatment program;</p> | <p>- methodology of synthesis of the received information (identified symptoms, syndromes, pathological changes) for diagnosis and treatment selection;</p> |
| 2. | GPC-4. | Able to apply medical products, provided by the order of healthcare delivery, as well as examine patients for the purpose of | IGPC 4.1 Knows the methodology of collecting anamnesis of life and diseases, complaints from patients (their legal | appointments of medical instruments, rules and techniques for working with general | Use the simplest medical instruments (scalpel, forceps, probe, hemostatic | The simplest medical instruments. |

| | | | | | | |
|----|--------|---|--|--|--|---|
| | | determining the diagnosis | representatives); the methodology of examination and physical examination; clinical picture, methods of diagnosis of the most common diseases; methods of laboratory and instrumental studies to assess the state of health, medical indications for research, rules for interpreting their results; international statistical classification of diseases and health-related problems; conditions requiring urgent medical care; the procedure for the use of medical devices in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, assistance taking into account the standards of medical care | surgical instruments. | forceps, retractors, etc.) | |
| 3. | GPC-5. | Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems | IGPC-5.1 Knows: anatomy, histology, embryology, topographic anatomy, physiology, pathological anatomy and physiology of human organs and systems | Anatomical and physiological, age-sexual and individual features of the structure and development of a | Palpate the main bone landmarks on a person, outline the topographic contours of organs and the main vascular and nerve trunks | Medical-anatomical conceptual apparatus The basics of |

| | | | | | | |
|----|---------|---|--|---|---|--|
| | | | IGPC 5.2 is able to: evaluate the basic morphofunctional data, physiological states and pathological processes in the human body | healthy and sick organism. The functional systems of the body, their regulation and self-regulation when exposed to the external environment are normal and pathological . | | surgical medical measures to provide first aid in urgent and life-threatening conditions. |
| 4. | GPC-10. | Able to understand the principles of modern information technologies and use them to solve the tasks of professional activity | IGPC 10.2 Able to: apply modern information and communication technologies to solve the tasks of professional activity; carry out an effective search for information necessary to solve the tasks of professional activity using reference systems and professional databases; use modern medical and biological terminology; master and apply modern information and communication technologies in professional activity, taking into account the basic requirements of information security | Theoretical foundations of computer science, collection, storage, search, processing, transformation, dissemination of information in medical and biological systems, use of information computer systems in medicine and healthcare. | Able to: apply modern information and communication technologies to solve the tasks of professional activity; carry out an effective search for information necessary to solve the tasks of professional activity using reference systems and professional databases; use modern medical and biological terminology; master and apply modern information and communication technologies in professional activity, taking into account | Use educational, scientific, popular science literature, the Internet for professional activities. |

| | | | | | | |
|----|------|--|---|---|--|--|
| | | | | | the basic requirements of information security | |
| 5. | PC-3 | Able to: provide emergency medical care to patients in case of sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life, provide emergency medical care to patients in conditions that threaten the patient's life, including clinical death (suspension of vital functions the human body (circulation and/or respiration) | IPC 3.2 able to: carry out measures to provide medical care in emergency and emergency forms; measures of basic cardiopulmonary resuscitation in combination with electropulse therapy | Principles and methods of first surgical care and emergency conditions. | Identify life-threatening disorders and provide first aid to victims in emergency situations in the affected areas, in emergency situations. | The basics of surgical medical measures to provide first aid in urgent and life-threatening conditions |
| 6. | PC-7 | Able to: make a differential diagnosis with other diseases/conditions including emergencies, establish a diagnosis taking into account the current international statistical classification of diseases and related health problems (ICD) | IPC 7.1 Knows: etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, features of the course, complications and outcomes of diseases of internal organs; methods of laboratory and instrumental studies to assess the state of health, medical indications for conducting research, rules for interpreting their results; ICD IPC 7.2 able to: analyze the results of the patient's examination, if necessary, justify and plan the scope of additional studies; interpret the results of collecting information about the patient's disease; | The general principle of the layered structure of the human body; topographic anatomy of specific areas; clinical anatomy of specific areas; clinical anatomy of internal organs, cellular spaces, neurovascular formations, bones and large joints, weak points of the abdominal | Use the knowledge of topographic anatomy to substantiate the diagnosis, for the method of surgical intervention; use general and special surgical instruments; perform individual surgical techniques and operations | Medical instruments; skills of making a preliminary diagnosis; the skill of comparing morphological and clinical manifestations of diseases; the basics of medical |

| | | | | | | |
|--|--|--|---|--|--|--|
| | | | interpret the data obtained during the laboratory examination of the patient; interpret the data obtained during the instrumental examination of the patient; interpret the data obtained during the consultations of the patient by specialist doctors; carry out differential diagnosis of diseases internal organs from other diseases | wall; collateral circulation in violation of the main blood vessels; age-related features of the structure, shape and position of organs; the most common defects development – their essence and principles of surgical correction; indications, technique of performing simple emergency surgical interventions: surgical instruments; primary surgical treatment of wounds; the essence of the operation, indications, the main stages of more complex emergency and planned surgical interventions | | diagnostic and therapeutic measures to provide first aid in urgent and life-threatening conditions.; |
|--|--|--|---|--|--|--|

4. Sections of the academic discipline and competencies that are formed when mastering them

| № | Competence code | Section name of the discipline | The content of the section in teaching units |
|-----|--|--|---|
| 1. | UC-1, GPC-4, GPC-5; GPC-10, PC-3. PC-7 | Introduction. The subject and tasks of topographic anatomy and operative surgery. | 1. The subject and objectives of the discipline. |
| 2. | UC-1, GPC-4, GPC-5; GPC-10, PC-3. PC-7 | Surgical instruments. The technique of applying surgical sutures and tying knots. | 1. Tools and their use. 2. Nodes. 3. Sutures. |
| 3. | UC-1, GPC-4, GPC-5; GPC-10, PC-3. PC-7 | Topographic anatomy of the upper limb. Operative surgery of the upper limb. | 1. The shoulder. 2. Shoulder joint, arm. 3. Elbow joint, forearm. 4. Wrist joint, hand. |
| 4. | UC-1, GPC-4, GPC-5; GPC-10, PC-3. PC-7 | Topographic anatomy of the lower limb. Operative surgery of the lower limb. | 1. The gluteal region. 2. Hip joint, thigh. 3. Knee joint, leg. 4. Ankle joint, foot. |
| 5. | UC-1, GPC-4, GPC-5; GPC-10, PC-3. PC-7 | Topographic anatomy of the head (neurocranium and facial parts). Operative head surgery. | 1. Neurocranium part. 2. The facial part. |
| 6. | UC-1, GPC-4, GPC-5; GPC-10, PC-3. PC-7 | Topographic anatomy of the neck. Operative surgery upon the neck. | 1. Anterior part of the neck. |
| 7. | UC-1, GPC-4, GPC-5; GPC-10, PC-3. PC-7 | Topographic anatomy of the thorax. Operative surgery upon the thorax. | 1. Thoracic wall. 2. Organs of the thoracic cavity. |
| 8. | UC-1, GPC-4, GPC-5; GPC-10, PC-3. PC-7 | Topographic anatomy of the abdomen. Operative surgery upon abdomen. | 1. Anterolateral wall of the abdomen. 2. The upper floor of the abdominal cavity. 3. The lower floor of the abdominal cavity. |
| 9. | UC-1, GPC-4, GPC-5; GPC-10, PC-3. PC-7 | Topographic anatomy of the lumbar region and retroperitoneal space. Operative surgery of the lumbar region and retroperitoneal space. | 1. The posterior wall of the abdomen (lumbar region). 2. Retroperitoneal space. |
| 10. | UC-1, GPC-4, GPC-5; GPC-10, PC-3. PC-7 | Topographic anatomy of the pelvis and perineum. Operative surgery of the pelvis and perineum. | 1. Organs of the pelvic cavity. 2. Pelvic wall. |

5. Volume of the academic discipline and types of academic work

| Type of educational work | Labor intensity | | Labor intensity (AH) in semesters | |
|---|-----------------------------|-------------------------------|-----------------------------------|------------|
| | volume in credit units (CU) | volume in academic hours (AH) | 6 | 7 |
| Classroom work, including | 3,38 | 122 | 32 | 90 |
| Lectures (L) | 0,55 | 20 | 8 | 12 |
| Laboratory practicum (LP)* | | | | |
| Practicals (P) | 1,84 | 66 | 24 | 42 |
| Seminars (S) | | | | |
| Student's individual work (SIW) | 1,6 | 58 | 22 | 36 |
| Mid-term assessment | 1 | 36 | | 36 |
| credit/exam (<i>specify the type</i>) | | | | |
| TOTAL LABOR INTENSITY | 5 | 180 | 54 | 126 |

6. Content of the academic discipline

6.1. Sections of the discipline and types of academic work

| No. | No. Semester | Name of the section of the academic discipline | Types of academic work* (in AH) | | | |
|-----|--------------|---|---------------------------------|-----------|-----------|------------|
| | | | L | P | SIW | total |
| 1 | VI | Introduction. The subject and tasks of topographic anatomy. | 2 | 4 | 4 | 10 |
| 2 | VI | Surgical instruments. Types of sutures and knots. | | 4 | 6 | 10 |
| 3 | VI | Topographic anatomy of the upper limb. Operative surgery of the upper limb. | 2 | 8 | 6 | 16 |
| 4 | VI | Topographic anatomy of the lower limb. Operative surgery of the lower limb. | 4 | 8 | 6 | 18 |
| 5 | VII | Topographic anatomy of the head (neurocranium and facial parts). Operative surgery upon the head. | 2 | 4 | 6 | 12 |
| 6 | VII | Topographic anatomy of the neck. Operative surgery upon the neck. | 2 | 8 | 6 | 16 |
| 7 | VII | Topographic anatomy of the thorax. Operative surgery upon the thorax. | 2 | 5 | 6 | 13 |
| 8 | VII | Topographic anatomy of the abdomen. Operative surgery upon abdomen. | 4 | 15 | 6 | 25 |
| 9 | VII | Topographic anatomy of the lumbar region and retroperitoneal space. Operative surgery of the lumbar region and retroperitoneal space. | 2 | 5 | 6 | 13 |
| 10 | VII | Topographic anatomy of the pelvis and perineum. Operative surgery of the pelvis and perineum. | | 5 | 6 | 11 |
| | VII | Exam. | | | | 36 |
| | | TOTAL | 20 | 66 | 58 | 180 |

* - L – lectures; P – practicals; SIW – student's individual work.

6.2. Thematic schedule of educational work types:

6.2.1 Thematic schedule of lectures

| № | Name of lecture topics | Volume in AH | |
|---|--|--------------|------------|
| | | semester 6 | semester 7 |
| 1 | Introduction to the course of operative surgery and topographic anatomy. | 2 | |
| 2 | General principles of angiosurgery. | 2 | |
| 3 | Operations on nerve trunks and tendons. | 2 | |
| 4 | Operations on bones and joints. | 2 | |
| 5 | Operations on the neurocranium of the head. | | 2 |
| 6 | Operations upon the neck. | | 2 |

| | | | |
|----|--|----------|-----------|
| 7 | Operations on the thoracic wall and organs of the thoracic cavity. | | 2 |
| 8 | Operations for abdominal hernias (inguinal and femoral hernias). | | 2 |
| 9 | General principles of abdominal surgery. Operations on the small and large intestines. | | 2 |
| 10 | Operations on the stomach, liver and biliary tract. | | 2 |
| | TOTAL (total – 20 AH) | 8 | 12 |

6.2.2. The thematic plan of laboratory practicums (*if this type of classes is stipulated in the curriculum*)

6.2.3. Thematic plan of practicals

| № | Name of the topics of practicals | Volume in AH | |
|----|---|--------------|------------|
| | | semester 6 | semester 7 |
| 1 | The subject and tasks of topographic anatomy. Surgical instruments. Separation and connection of tissues. Types of sutures and knots. | 8 | |
| 2 | Topographic anatomy of the shoulder and arm, shoulder joint, elbow joint. | 4 | |
| 3 | Topographic anatomy of the forearm, wrist joint, hand. Operations in case of purulent diseases of the fingers and hands. | 4 | |
| 4 | Topographic anatomy of the gluteal region and thigh, hip joint. | 4 | |
| 5 | Topographic anatomy of the knee joint, leg and foot. Arthrotomy and puncture of the knee joint. | 4 | |
| 6 | Topography of the neurocranial and facial parts of the head. Trepanation of the skull. | | 4 |
| 7 | Topographic anatomy and operative surgery of the neck. Neck borders, triangles, fascia, cellular spaces. | | 4 |
| 8 | Topography of the sublingual region, neck organs: thyroid and parathyroid glands, larynx, pharynx, esophagus. Operations on the thyroid gland. | | 4 |
| 9 | Topographic anatomy and operative surgery upon the thorax. Topography of the thoracic wall and organs of the thoracic cavity. Puncture of the pleural cavity, incisions for mastitis, suturing of an open pneumothorax. | | 5 |
| 10 | Topographic anatomy of the anterolateral abdominal region. Topographic anatomy of the inguinal canal. Inguinal hernias. Operations for inguinal hernias. | | 5 |
| 11 | Topographic anatomy of the upper floor of the abdominal cavity. The position of organs, the course of the peritoneum, the relation of organs to the peritoneum, the derivatives of the peritoneum. Syntopia, skeletotopy of organs. | | 5 |
| 12 | Topographic anatomy of the lower floor of the abdominal cavity. The small intestine. The colon. Appendectomy. Intestinal suture, interstitial anastomoses. | | 5 |

| | | | |
|----|--|-----------|-----------|
| 13 | Topographic anatomy and operative surgery of the lumbar region and retroperitoneal space. Weaknesses, fascias and cellular spaces of the lumbar region. Topography of the kidneys, adrenal glands and ureters. | | 5 |
| 14 | Topographic anatomy of the pelvis and perineum. The walls of the pelvis and pelvis diaphragm. Pelvic cavity, division of the pelvis into "floors". | | 5 |
| | TOTAL (total – 66 AH) | 24 | 42 |

6.2.4. Thematic plan of seminars (*if this type of classes is stipulated in the curriculum*)

6.2.5. Types and topics of student's individual work (SIW)

| № | Types and topics of SIW | Volume in AH | |
|----|--|--------------|------------|
| | | semester 6 | semester 7 |
| 1 | Preparation of a speech on the topics of Outstanding figures of medicine and healthcare, outstanding medical discoveries, the influence of humanistic ideas on medicine. | 4 | |
| 2 | Independent analysis of instruments "in the center of practical skills" and manipulation of basic general surgical instruments. | 6 | |
| 3 | Preparation of reports on current topics. | 6 | |
| 4 | Work with tests in an interactive form on the topics: topography of the upper and lower limbs. | 6 | |
| 5 | Independent analysis and solution of situational tasks. | | 6 |
| 6 | Analysis of topography by topographic anatomical preparation. | | 6 |
| 7 | Independent work with additional literature. | | 6 |
| 8 | Work on training simulators at the Practical skills center. | | 6 |
| 9 | Working out techniques for suturing tendons, nerves on canned preparations. | | 6 |
| 10 | Work with tests in an interactive form for all topics. | | 6 |
| | TOTAL (total – 58 AH) | 22 | 36 |

7. Types of assessment formats for ongoing monitoring and mid-term assessment

| № | Se mes ter No. | Types of control | | Name of section of academic discipline | Assessment formats | | |
|----|----------------|-------------------------------------|--------------------------------|--|----------------------|--------------------------|-----------------------------|
| | | | | | types | number of test questions | number of test task options |
| 1. | 6 | Current monitoring (control works). | Control of mastering the topic | 1. Topographic anatomy and operative surgery of the upper limb: 2. Topographic anatomy and operative surgery of the lower limb. | written test | 5 | 5 |
| | | | | | individual interview | 10 | More than 10 |
| 2 | 7 | Current monitoring (control works). | Control of mastering the topic | 1. Topographic anatomy and operative surgery of the head. 2. Topographic anatomy and operative surgery of the neck. | testing | 20 | More than 10 |

| | | | | | | |
|----|---|-------------------------------------|--|--|----|--------------|
| | | | 3. Topographic anatomy and operative surgery of the thorax. 4. Topographic anatomy and operative surgery of the abdomen. 5. Topographic anatomy and operative surgery of the lumbar region. 6. Topographic anatomy and operative surgery of the pelvis. | written test | 5 | 5 |
| | | | | individual interview | 10 | More than 10 |
| 3. | 7 | Mid-term assessment (credit) | 1. Surgical instruments. 2. The technique of applying surgical sutures and tying knots. | Credit for practical skills | 3 | 30 |
| 4. | 7 | Mid-term assessment (final testing) | Topographic anatomy and operative surgery. (all sections of the discipline) | Computer testing | 20 | More than 30 |
| 5. | 7 | Mid-term assessment Exam | Topographic anatomy and operative surgery of the upper and lower limbs, head, neck, thorax, abdomen, lumbar region and pelvis. | Ticket interview including theoretical questions | 3 | 60 |

8. Educational, methodological and informational support for mastering the academic discipline (printed, electronic publications, the Internet and other network resources)

8.1. Key literature references

| № | Name according to bibliographic requirements | Number of copies |
|----|---|------------------|
| | | in the library |
| 1. | Topographic anatomy and operative surgery: textbook in 2 volumes/ I.I. Kagan. 2015. | 60 |
| 2. | Operative surgery and topographic anatomy: textbook in 2 volumes/ A.V.Nikolaev. 2009. | 90 |

8.2. Further reading

| № | Name according to bibliographic requirements | Number of copies |
|----|--|------------------|
| | | in the library |
| 1. | Operative surgery and topographic anatomy: textbook. G.E.Ostroverkhov, Y.M.Bomash, D.N.Lubotsky. 2005 | 50 |
| 2. | Educational and methodical guide on topographic anatomy and operative surgery for students of the General Medicine faculty. V.I.Sergienko, E.A.Petrosyan, A.A.Sukhinin 2001. | 30 |
| 3. | Fundamentals of topographic anatomy of the abdomen and abdominal surgery. G.A. Bulanov , V.Ya.Ovsiyannikov. 2003. | 80 |
| 4. | Topographic anatomy of limb joints. G.A.Bulanov, V.Ya.Ovsiyannikov 2001. | 120 |

| | | |
|----|---|----|
| 5. | Practicum on operative surgery and topographic anatomy. O.G.Bolshakov, G.M.Semenov. 2001. | 45 |
| 6. | Situational tasks. V.P.Vladimirov, I.I.Kagan 2006. | 40 |

8.3. List of methodological recommendations for independent work of students:

| No. | Name according to bibliographic requirements | Number of instances |
|-----|---|---------------------|
| | | at the department |
| 1. | Methodological developments in operative surgery and topographic anatomy with elements of programmed control for students of the Faculty of Medicine. 2019. | 25 |

8.4 Electronic educational resources for teaching academic subjects:

8.4.1. Internal Electronic Library System of the University (IELSU)

| No. | Name of the electronic resource | Brief description (content) | Access conditions | Number of users |
|-----|--|---|---|-----------------|
| 1. | Internal Electronic Library System (EBS) | The works of the academic staff of the Academy: textbooks and manuals, monographs, collections of scientific papers, scientific articles, dissertations, abstracts of dissertations, patents. | from any computer located on the Internet, using an individual login and password [Electronic resource] – Access mode: http://95.79.46.206/login.php | Not limited |

8.4.2. Electronic educational resources acquired by the University

| № | Name of the electronic resource | Brief description (content) | Access conditions | Number of users |
|----|--|---|---|---------------------------|
| 1. | Electronic database "Student Consultant" | Educational literature + additional materials (audio, video, interactive materials, test tasks) for higher medical and pharmaceutical education. Publications are structured by specialties and disciplines in accordance with the current Federal State Educational Standards of Higher Education. | from any computer located on the Internet, using an individual login and password [Electronic resource] – Access mode: http://www.studmedlib.ru/ | General PRMU subscription |
| 2. | Electronic library system "Bukap" | Educational and scientific medical literature of Russian publishers, including | from any computer located on the Internet by login and password, from | General PRMU subscription |

| | | | | |
|----|---|---|---|------------------------------------|
| | | translations of foreign publications. | the computers of the academy. The subscription editions are available for reading. [Electronic resource] – Access mode: http://www.books-up.ru/ | |
| 3. | "Bibliopoisk" | Integrated "single window" search service for electronic catalogs, EBS and full-text databases. The results of a single search in the demo version include documents from domestic and foreign electronic libraries and databases available to the university as part of a subscription, as well as from open access databases. | PRMU has access to the demo version of the Bibliopoisk search engine: http://bibliosearch.ru/pimu . | General PRMU subscription |
| 4. | Domestic electronic periodicals | Periodicals on medical subjects and on higher school issues | - from the computers of the academy on the platform of the electronic library eLibrary.RU -journals of the publishing house "Mediasphere" - from library computers or are provided by the library at the request of the user [Electronic resource] – Access mode: https://elibrary.ru/ | |
| 5. | International scientometric database "Web of Science Core Collection" | Web of Science covers materials on natural, technical, social, and humanitarian sciences; takes into account the mutual citation of | Access is free from PRMU computers [Electronic resource] – Access to the resource at: http://apps.webofkn | Access is free from PRMU computers |

| | | | | |
|--|--|---|--------------|--|
| | | publications developed and provided by Thomson Reuters; has built-in capabilities for searching, analyzing, and managing bibliographic information. | nowledge.com | |
|--|--|---|--------------|--|

8.4.3 Open access resources

| № | Name of the electronic resource | Brief description (content) | Access conditions |
|----|--|---|---|
| 1. | Federal Electronic Medical Library (FEML) | Includes electronic analogues of printed publications and original electronic publications that have no analogues recorded on other media (dissertations, abstracts, books, journals, etc.). [Electronic resource] – Access mode: http://нэб.рф/ | from any computer located on the Internet |
| 2. | Scientific Electronic Library eLIBRARY.RU | The largest Russian information portal in the field of science, technology, medicine and education, containing abstracts and full texts of scientific articles and publications. [Electronic resource] – Access mode: https://elibrary.ru/ | from any computer located on the Internet |
| 3. | Open Access Scientific Electronic Library CyberLeninka | Full texts of scientific articles with annotations published in scientific journals of Russia and neighboring countries. [Electronic resource] – Access mode: https://cyberleninka.ru/ | from any computer located on the Internet |
| 4. | Russian State Library (RSL) | Abstracts for which there are copyright agreements with permission for their open publication [Electronic resource] – Access mode: http://www.rsl.ru/ | from any computer located on the Internet |
| 5. | Legal reference system "Consultant Plus" | Federal and regional legislation, judicial practice, financial advice, comments on legislation, etc. [Electronic resource] – Access mode: http://www.consultant.ru/ | from any computer located on the Internet |
| 6. | Official website of the Ministry of Health of the Russian Federation | National clinical guidelines [Electronic resource] – Access mode: cr.rosminzdrav.ru - Clinical recommendations | from any computer located on the Internet |

9. Material and technical support for mastering an academic discipline

9.1. List of premises for classroom activities for the discipline

Part of the department is located at the address: Rodionova Street, 190a.

On the 1st and 3rd floors of the academic building No. 4.

The department has 4 classrooms for practical classes (rooms No. 4, 58, 59, 60). Equipped with a

"Practical skills Center" on the ground floor, classrooms equipped with simulation equipment. The center has two training operating rooms (No. 10, 11), one room for practical training (No. 9), a room for laparoscopic and endoscopic manipulations (No. 13).

We have a large lecture hall equipped with a multimedia complex. in the academic building No. 4.

9.2. List of equipment for classroom activities for the discipline

Rooms for practical classes are equipped with:

- blackboard for the classroom,
- furniture (student tables and chairs),
- a set of tables and figures,
- human skeleton,
- dummies (upper limb, lower limb, head, neck),
- horizontal cuts of the human torso at different levels (chest, abdomen, pelvis),
- multimedia complex (laptop, projector, screen)
- TV panel,
- educational videos, slides,
- a set of surgical instruments.

In the "Center of Practical Skills" training operating rooms are equipped with:

- Furniture and demonstration equipment (plastic-coated tables, spinning stools, shadowless lamps, rack hangers, blackboard for the classroom).

- A set of surgical instruments.
- Simulators for mastering practical surgical skills;
 - simulators for mastering the technique of tying surgical knots,
 - simulators for mastering the technique of applying a vascular suture,
 - simulators for mastering the technique of applying intestinal sutures,
 - simulator for mastering the puncture of the shoulder joint,
 - simulators for mastering the technique of cryostomy and tracheostomy,
 - simulators for mastering the technique of drainage of the pleural cavity,
 - simulator for mastering the technique of laparotomy and abdominal closure,
 - simulator for mastering plastic surgery of the inguinal hernia gate.

A set of educational drawings and diagrams.

Siliconized anatomical preparations:

- Sagittal cut of the head.
- Upper floor of the abdominal cavity.

The room for laparoscopic and endoscopic manipulations is equipped with:

- furniture and demonstration equipment.
- a set of endoscopic instruments.
- simulators for mastering endoscopic surgical skills.
- laparoscopic stand and equipment

9.3. A set of licensed and freely distributed software, including domestic production

| Item no. | Software | number of licenses | Type of software | Manufacturer | Number in the unified register of Russian software | Contract No. and date |
|----------|----------|--------------------|------------------------------|------------------------------|--|----------------------------|
| 1 | Wtware | 100 | Thin Client Operating System | Kovalev Andrey Alexandrovich | 1960 | 2471/05-18 from 28.05.2018 |

| | | | | | | |
|---|--|-----|--------------------|------------------------------|---|---|
| 2 | MyOffice is Standard. A corporate user license for educational organizations, with no expiration date, with the right to receive updates for 1 year. | 220 | Office Application | LLC "NEW CLOUD TECHNOLOGIES" | 283 | without limitation, with the right to receive updates for 1 year. |
| 3 | LibreOffice | | Office Application | The Document Foundation | Freely distributed software | |
| 4 | Windows 10 Education | 700 | Operating systems | Microsoft | Azure Dev Tools for Teaching Subscription | |
| 5 | Yandex. Browser | | Browser | «Yandex» | 3722 | |
| 6 | Subscription to MS Office Pro for 170 PCs for FGBOU VO "PIMU" of the Ministry of Health of Russia | 170 | Office Application | Microsoft | | 23618/HN10030 LLC "Softline Trade" from 04.12.2020 |

10. List of changes to the working program of the discipline "Topographic anatomy and operative surgery" (to be filled out by the template)

Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation
(FSBEI HE "PRMU" of the Ministry of Health of Russia)

Department of

**GENERAL, OPERATIVE SURGERY AND TOPOGRAPHIC ANATOMY
named after A.I. KOZHEVNIKOV**

CHANGE REGISTRATION SHEET

working program for the academic discipline
Topographic anatomy and operative surgery

Field of study / specialty / scientific specialty: - **31.05.01 GENERAL MEDICINE**
(code, name)

Training profile: **GENERAL PRACTITIONER**
(name) - for master's degree programs

Mode of study: **FULL-TIME**
full-time/mixed attendance mode/extramural

| Position | Number and name of the program section | Contents of the changes made | Effective date of the changes | Contributor's signature |
|----------|--|------------------------------|-------------------------------|-------------------------|
| 1 | | | | |

Approved at the department meeting
Protocol No. _____ of _____ 20__

Head of the Department of General, Operative Surgery and Topographic Anatomy named after A.I. Kozhevnikov, Professor, MD.

« ____ » _____ 20__ . _____ Bazaev A.V.
(signature)