

**FEDERAL STATE BUDGETARY
EDUCATIONAL INSTITUTION OF HIGHER EDUCATION
“AMUR STATE MEDICAL ACADEMY”
MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION**

AGREED

Vice-Rector for Academic Affairs,

 N.V. Loskutova

April 17, 2025

Decision of the CCMC

April 17, 2025

Protocol No. 7

APPROVED

by decision of the Academic Council of the
FSBEI HE Amur SMA of the Ministry of
Health of the Russian Federation

April 22, 2025

Protocol No. 15

Acting Rector of the FSBEI HE Amur SMA
of the Ministry of Health of the Russian
Federation



 I.V. Zhukovets

April 22, 2025

**EDUCATIONAL PROGRAM
discipline " General surgery "**

Specialty: 31.05.01 General Medicine

Course: 3

Semester: 5,6

Total hours: 216 hrs.

Total credits: 6 credits

Control form: examination, 6 semester

Blagoveshchensk, 2025

The educational program of the discipline is designed in accordance with the requirements of the Federal State Educational Standard of Higher Education - specialist in specialty 31.05.01 General Medicine, approved by order of the Ministry of Education and Science of Russia dated 08/12/2020 No. 988 (registered with the Ministry of Justice of Russia on 08/26/2020 No. 59493), BPEP HE (2021).

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Conclusion of the Expert Commission for review of the Educational Programs:

Protocol No. 2 dated April 10, 2025

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May 27, 2025

 **N.G. Brush**

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1. EXPLANATORY NOTE

1.1 Characteristics of the discipline

General surgery includes the study of the basics of clinical surgical activity. General surgery is one of the first clinical disciplines of a medical university, the study of which is one of the most important conditions for improving the theoretical and practical training of a doctor. When studying the discipline, students of the medical faculty develop important professional skills in examining a patient, the basics of clinical thinking, medical ethics and deontology. Without mastering these essential skills of surgical propaedeutics to perfection, it is difficult to count on sufficiently high-quality training of students in senior years. Thus, general surgery is an integral fundamental part of the clinical training of a doctor.

1.2. Objectives and tasks of the discipline

The purpose of teaching the discipline is to study the basics of clinical surgical activity and the organization of surgical care for the population.

Learning objectives of the discipline:

- study of the basics of asepsis and antisepsis;
- study of issues of transfusion of blood components and preparations, blood substitutes;
- mastering the methodology for examining patients with surgical diseases;
- mastering the principles of preparing patients for surgery and postoperative care;
- study of issues of diagnostics, provision of first aid and treatment of patients with injuries to the musculoskeletal system, chest and abdominal cavity;
- study of issues of diagnosis and treatment of purulent infection of soft tissues;
- study of the basics of anesthesiology and resuscitation;
- study of diagnostic issues and provision of assistance in critical conditions

1.3. The place of the discipline in the structure of the main professional educational program of higher education.

In accordance with the Federal State Educational Standard of Higher Education - specialist in specialty 31.05.01 General Medicine (2020), the discipline "General Surgery" refers to the disciplines of the basic part. Block 1. The total workload is 6 credits (216 hours), taught in 5-6 semesters in the 3rd year. Form of control - exam.

To study the academic discipline "General Surgery" it is necessary to have knowledge, skills and abilities formed by programs in anatomy, histology, physiology, pathological anatomy, and microbiology.

The discipline "General Surgery" is a prerequisite for studying the disciplines:

- faculty surgery;
- hospital surgery;
- pediatric surgery;
- traumatology;
- neurosurgery;
- other clinical disciplines.

The discipline "General Surgery" consists of 6 sections, which present the most important and necessary information that determines the educational process:

- ◆ asepsis and antiseptics;
- ◆ transfusion of blood components and blood substitutes;
- ◆ fundamentals of traumatology;
- ◆ examination of a surgical patient preoperative period, surgical operation. Postoperative period and complications in the postoperative period;
- ◆ purulent diseases of soft tissues;
- ◆ Fundamentals of anesthesiology and resuscitation.

1.4. Requirements for students

To study a discipline, knowledge, skills and abilities formed by previous disciplines are necessary.

<p>Normal anatomy, topographic and operative surgery Knowledge: about the structural features, functions and topographic relationships of human organs and systems Skills: apply knowledge when examining patients with surgical pathology, choosing a surgical technique Skills: perform manipulations taking into account human anatomy</p>
<p>Histology. Knowledge: knowledge of the structure of tissues and cells of the body, tissue regeneration processes taking into account a person's age Skills: select a method of wound treatment, taking into account the mechanism of the wound process. Skills: conduct treatment taking into account the peculiarities of tissue structure</p>
<p>Pathological anatomy Knowledge: knowledge of pathological changes in organs and tissues of various surgical diseases in patients of different ages Skills: select adequate treatment taking into account the nature of pathological changes in tissues. Skills: conduct treatment taking into account the course of pathological processes in tissues and organs</p>
<p>Latin Knowledge: Basic medical and pharmaceutical terminology in Latin Skills: be able to apply knowledge for communication and obtaining information about medical literature, medical documentation (II - III level). Skills: Use language skills when prescribing treatment</p>
<p>Propaedeutics of internal diseases Knowledge: necessary for examination of surgical patients. Skills: for making a diagnosis and developing treatment tactics Skills: use knowledge of the subject in diagnosing surgical pathology</p>
<p>Physics Knowledge: use of information computer systems in medicine and healthcare; principles of operation and design of equipment used in medicine, fundamentals of physical and mathematical laws reflected in medicine (II - III level). Skills: be able to use educational, scientific, popular science literature, the Internet for professional activities, work with equipment taking into account safety regulations Skills: using the Internet when choosing diagnostic and treatment methods for surgical patients</p>
<p>Biochemistry Knowledge: structure and biochemical properties of the main classes of biologically important compounds, the main metabolic pathways of their transformation; the role of cell membranes and their transport systems in metabolism (II - III levels). Skills: be able to analyze biochemical processes in the development of surgical pathology. Skills: use knowledge to assess the course of the pathological process and choose a treatment method</p>
<p>Microbiology Knowledge: knowledge of pathogens causing purulent processes. Skills: choose an adequate treatment strategy for purulent processes Skills: assess the nature of the pathogen to select an adequate treatment method and predict the course of the pathological process.</p>

Pharmacology**Knowledge:** medicines used in surgery, anesthesiology and resuscitation, their mechanism of action**Skills:** choosing the optimal method of treating surgical pathology**Skills :** to create adequate treatment regimens for surgical pathology, taking into account the mechanism of action of drugs.**1.5 Interdisciplinary links of the discipline with subsequent disciplines**

No. p/p	Name of subsequent disciplines	No. of discipline sections required for studying subsequent disciplines					
		1	2	3	4	5	6
1	Faculty therapy	+	+				+
2	Faculty surgery	+	+	+	+	+	+
3	Traumatology orthopedics	+	+	+	+	+	+
4	Otorhinolaryngology	+	+				+
5	Anesthesiology, resuscitation, intensive care	+	+	+	+	+	+
6	Obstetrics and gynecology	+	+	+			+
7	Pediatrics	+	+	+	+	+	+
8	Neurology, medical genetics, neurosurgery	+	+		+	+	+
9	Psychiatry, medical psychology	+	+				+
10	Hospital surgery	+	+	+	+	+	+
11	Hospital therapy, endocrinology	+	+				+
12	Infectious diseases	+	+				+
13	Phthisiology	+	+				+
14	Outpatient therapy	+	+	+	+	+	+
15	Microbiology	+	+		+		
16	Oncology, radiation therapy	+	+	+	+	+	+
17	Public health and healthcare, health economics	+	+				+
18	Dentistry	+	+	+	+	+	+

1.6. Requirements for the results of mastering the discipline

The process of mastering the discipline "General Surgery" is aimed at developing the following competencies:

No · n/n	Code and name of competence	Code and name indicator of achievement of competence	As a result of studying the academic discipline "General Surgery" The student must		
			Know	Be able to	To own
Universal competencies					
1	UC-1. Capable of carrying out a critical analysis of problematic situations based on a systems approach and developing an action strategy	ID UC-1.1 . Analyzes a problem situation based on a systems approach. ID UC-1.2. Identifies gaps in information needed to solve problem situations and designs processes to eliminate them. ID UC-1.5 . Critically evaluates the reliability of information sources.	- a problematic situation in your professional field ; - a strategy for solving problem situations based on a systemic and interdisciplinary approach; - know reliable sources of information.	- analyze a problem situation based on a systems approach; - apply systems analysis to resolve problematic situations in the professional sphere; - use reliable sources of information to assess the situation.	- skills for critically evaluating modern concepts of a philosophical and social nature in their subject area; - possess methods for eliminating problematic situations; - the ability to assess the reliability of information sources.
General professional competencies					
2	GPC-1 . Able to implement moral and legal norms, ethical and deontological principles in professional activities	ID GPC-1.1. Carries out professional activities in accordance with ethical standards and moral principles. ID GPC-1.2. Organizes professional activities, guided by legislation in the field of healthcare, knowledge of medical ethics and deontology. ID GPC-1.3. Has the skills of presenting an independent point of view, analysis and logical thinking, public speaking, moral and	- ethical standards and moral principles in the performance of their professional activities; -organization of professional activities taking into account the principles of ethics and deontology; - principles of conducting discussions and round tables .	- apply the principles of ethics and deontology in your professional activity; - organize your professional activities taking into account moral and ethical principles and deontology; - conduct discussions.	- skills of expressing an independent point of view, analysis and logical thinking, public speaking, moral and ethical argumentation; - has organizational skills, guided by legislation in the field of healthcare, knowledge of medical ethics and deontology; - conducting discussions and round tables, principles of medical deontology and medical ethics.

		ethical argumentation, conducting discussions and round tables, principles of medical deontology and medical ethics.			
3	<p>GPC-4. Capable of using medical devices provided for by the procedure for providing medical care, as well as conducting patient examinations to establish a diagnosis</p>	<p>ID GPC-4.1. Uses modern medical technologies, specialized equipment and medical products, disinfectants, drugs, including immunobiological and other substances and their combinations when solving professional problems from the standpoint of evidence-based medicine.</p> <p>ID GPC-4.2. Knows the indications and contraindications for the use of instrumental, functional and laboratory examination methods, possible complications during examination, emergency care and their prevention.</p> <p>ID GPC-4.3 . Interprets the results of the most common methods of instrumental, laboratory and functional diagnostics, thermometry to identify pathological processes.</p> <p>ID GPC-4.4. Proficient in methods of general clinical examination of patients of various ages.</p> <p>ID GPC-4.5. Formulates a preliminary</p>	<p>- modern medical technologies, specialized equipment and medical products, disinfectants, drugs, including immunobiological and other substances and their combinations in solving professional problems from the standpoint of evidence-based medicine;</p> <p>- know the indications and contraindications for the use of instrumental, functional and laboratory examination methods, possible complications during the examination, emergency care and their prevention ;</p> <p>- know various examination methods;</p> <p>- methods of general clinical examination of patients of different ages;</p> <p>-modern classification of diseases.</p>	<p>- evaluate the results of the most common methods of instrumental, laboratory and functional diagnostics, thermometry to identify pathological processes;</p> <p>- select research methods for various surgical pathologies;</p> <p>- be able to select information about the effectiveness of various research methods; the ability to select survey methods ;</p> <p>- select adequate examination methods;</p> <p>-form a diagnosis.</p>	<p>- methods of general clinical examination of patients of different ages in order to establish a diagnosis;</p> <p>- has a working knowledge of the algorithm for examining and treating patients with various surgical pathologies;</p> <p>- the ability to select research methods in patients of different ages, taking into account the underlying and concomitant pathology;</p> <p>- the ability to prescribe an adequate examination;</p> <p>- has information about the effectiveness of various research methods;</p> <p>- formulate a preliminary diagnosis and clinical diagnosis according to the ICD.</p>

		diagnosis and clinical diagnosis according to ICD.			
4	<p>GPC-5 . Capable of assessing morphofunctional, physiological states and pathological processes in the human body to solve professional problems</p>	<p>ID GPC-5.1. Knows the functional systems of the human body, their regulation and self-regulation when interacting with the external environment in normal conditions and during pathological processes.</p> <p>ID GPC-5.2. Knows the etiology, pathogenesis, morphogenesis, pathomorphosis of disease development, and the basic concepts of nosology.</p> <p>ID GPC-5.3 . Knows the indicators of the morphofunctional and physiological state of a healthy person and can measure/determine them.</p> <p>ID GPC-5.6 . Interprets the results of biopsy and surgical material studies to solve professional problems, taking into account professional standards</p> <p>ID GPC-5.8 . Formulates a diagnosis in accordance with the identified pathological changes according to the ICD.</p>	<p>- functional systems of the human body, their regulation and self-regulation during interaction with the external environment in normal conditions and during pathological processes;</p> <p>-etiology, pathogenesis, morphogenesis, pathomorphosis of disease development,</p> <p>- the main indicators of the morphofunctional, physiological state of a healthy person ;</p> <p>- knows the morphological changes in tissues in various pathologies;</p> <p>- knows the specifics of forming a diagnosis taking into account the identified morphological changes in tissues.</p>	<p>- analyze macroscopic and microscopic changes in normal and pathologically altered tissues and organs;</p> <p>- to assess the course of the pathological process;</p> <p>- knows how to assess morphological changes in surgical pathology ;</p> <p>- is able to apply the identified changes in tissues to make a diagnosis.</p>	<p>- the ability to use indicators of morphofunctional, physiological state and pathological process to examine the human body in order to establish a diagnosis, prescribe treatment and monitor its effectiveness and safety;</p> <p>- have knowledge of the characteristics of the course of the pathological process based on the etiology of the disease ;</p> <p>-have the ability to evaluate indicators;</p> <p>- have the ability to use the identified morphological changes in tissues;</p> <p>- is able to form a diagnosis taking into account the results of morphological studies.</p>
5	<p>GPC-7. Able to prescribe treatment and monitor its effectiveness and</p>	<p>ID GPC -7.1 Selects a drug based on the totality of its pharmacokinetic and pharmacodynamic</p>	<p>- knows medicinal products by the totality of their pharmacokinetic and pharmacodynamic</p>	<p>- choose the optimal minimum of the most effective means, using their convenient</p>	<p>- the ability to evaluate the effectiveness and safety of drug therapy using a combination of clinical,</p>

	safety	<p>characteristics for the treatment of patients with various nosological forms in outpatient and inpatient settings.</p> <p>ID GPC-7.2. Selects the optimal minimum of the most effective means, using convenient methods of their use and the patient's financial capabilities for purchasing medications.</p> <p>ID GPC-7.3 . Explains the main and side effects of drugs, the effects of their combined use and interaction with food, taking into account the morphofunctional characteristics, physiological states and pathological processes in the human body</p>	<p>characteristics for the treatment of patients with various nosological forms in outpatient and inpatient settings;</p> <ul style="list-style-type: none"> - knows the optimal minimum of the most effective means, using convenient methods of their use and the patient's financial capabilities for purchasing medications ; - knows the main and side effects of drugs. 	<p>applications;</p> <ul style="list-style-type: none"> - use the most effective means for treatment; - knows how to avoid complications from drug treatment. 	<p>laboratory, instrumental and other diagnostic methods;</p> <ul style="list-style-type: none"> - has a command of the algorithm for drug treatment of surgical patients; - have the ability to avoid the side effects of drugs, the effects of their combined use and interaction with food, taking into account the nature of the surgical pathology .
Professional competencies					
6	<p>PC-1. Ability to collect and analyze complaints, life history, and patient disease history in order to establish a diagnosis and/or condition in the "therapy" profile</p> <p>PC-2. Ability to conduct a physical examination of a patient, analyze the results of</p>	<p>ID PC-1.1. Collect complaints, medical history, and life history from a patient with a disease and/or condition in the "therapy" profile (or his/her legal representative)</p> <p>ID PC-1.2. Interpret and analyze information received from a patient with a disease and (or) condition in the profile "therapy" (or his legal representative)</p> <p>PC-2.1. Conduct a physical examination of the patient (inspection, palpation, percussion, auscultation) and interpret its results</p>	<ul style="list-style-type: none"> - know the basic principles of communication with patients ; - know the main complaints in various surgical diseases; - know the medical history; - know information about the patient's medical history, including data on past illnesses, injuries and surgeries, hereditary, professional and epidemiological history. - know the methods of physical examination of the patient; - know the algorithm for examining a patient; - know the results of the patient's examination; 	<ul style="list-style-type: none"> - knows how to establish contact with surgical patients; - knows how to identify primary and secondary complaints when communicating with a patient; - is able to identify factors that contribute to the development of surgical pathology; - knows how to use the information received about the patient's life history. - knows how to conduct physical examination of the 	<ul style="list-style-type: none"> - has the ability to communicate with surgical patients of different ages; - has the ability to identify characteristic complaints in surgical diseases; -has the ability to assess the cause and dynamics of the pathological process; - has information about the patient's medical history for the purpose of making a diagnosis. - has mastered the methodology physical examination of the patient; - has a diagnostic algorithm; -has the ability to analyze; - has a command of the principles of

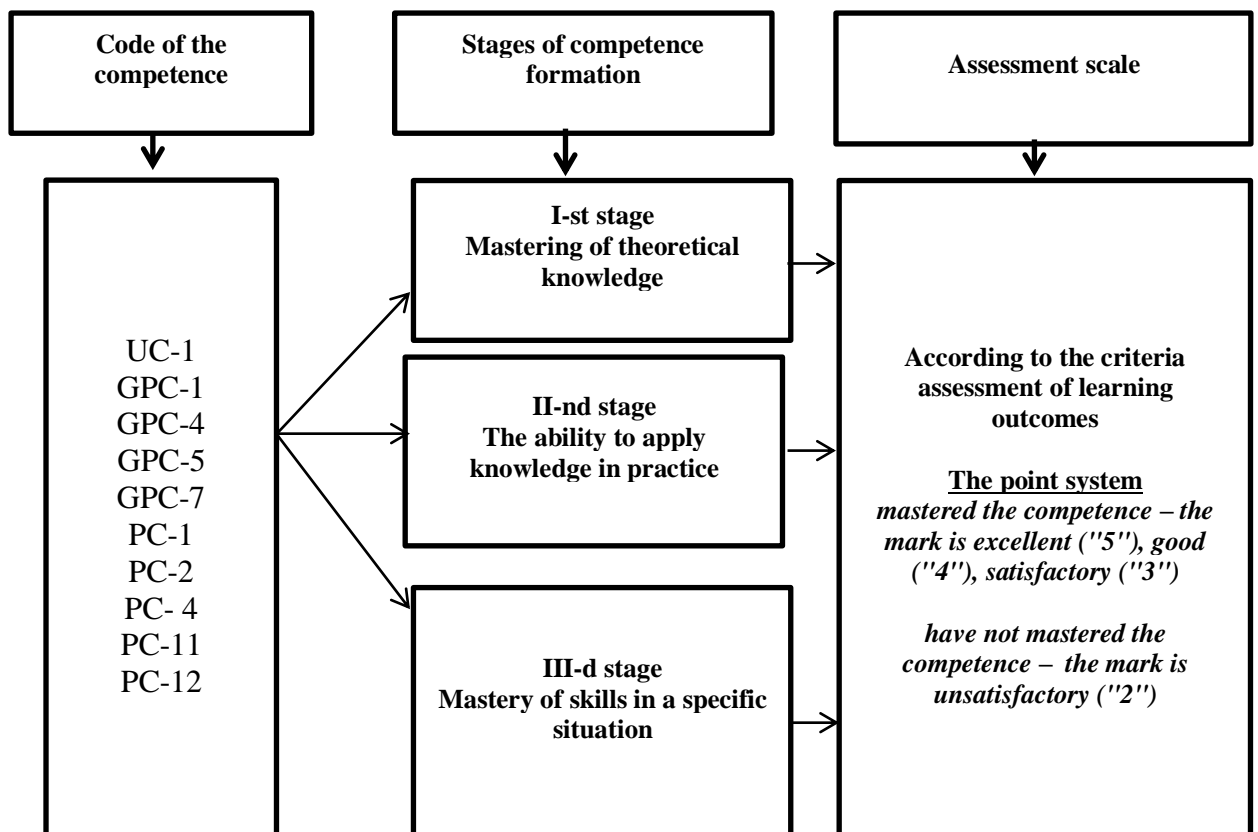
	additional examination methods in order to establish a diagnosis and (or) condition in the “therapy” profile	ID PC-2.2. Justify the need and scope of laboratory and instrumental examinations of a patient with a disease and (or) condition in the “therapy” profile	- know the principles of early diagnosis of diseases, taking into account the current international statistical classification of diseases and related health problems (ICD).	patient (inspection, palpation, percussion, auscultation) and interpret its results; - knows how to select the necessary examination algorithm; - knows how to analyze the results of the examination and plan the scope of additional research; - is able to apply the principles of early diagnosis of diseases, taking into account the current international statistical classification of diseases and related health problems (ICD).	early diagnosis of diseases, taking into account the current international statistical classification of diseases and related health problems (ICD).
7	PC-5. Ability to monitor the effectiveness and safety of the therapy carried out in the “therapy” profile -	ID PC-5.1. Analyze the pharmacological action and interaction of drugs in a patient with a disease and (or) condition in the profile "therapy" ID PC-5.2. Assess the effectiveness and safety of non-drug therapy, therapeutic nutrition, the use of drugs and medical devices in a patient with a disease and (or) condition	- -knows the schemes treatment in accordance with clinical recommendations (treatment protocols), procedures for providing medical care and taking into account standards of medical care; - knows non-drug treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care;	- knows how to prescribe medication treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care;	possesses the ability to analyze the action of drugs based on the totality of their pharmacological effects on the body, depending on the nature of the pathology; - has the ability to prescribe non-drug treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care;
8	PC-11. Ability to maintain medical records and control the quality of their maintenance	ID PC-11.1. Fill out medical documentation, including in the form of an electronic document, monitor the quality of its maintenance ID PC-11.2. Use in work personal data of patients and information constituting a medical secret ID PC-11.3. Use in professional activities medical information systems and the information and telecommunications network	- knows medical documentation, including in electronic form; - knows the principles of working with personal data of patients and information constituting a medical secret; - knows medical information systems and the information and telecommunications network	- knows how to work with medical documentation, including in electronic form; - knows how to work with patients' personal data and information constituting a medical secret; - knows how to draw up documentation when referring patients for hospitalization, consultation	- has the ability to work with medical documentation, including in electronic form; - has the ability to work with personal data of patients and information constituting a medical secret; -has the ability to prepare documentation when referring patients for hospitalization, consultation, spa treatment, medical

		"Internet".	"Internet -		and social examination.
9	PC-12 . Ability to provide medical care in emergency and urgent situations	<p>12.1. Recognize conditions that require emergency medical care, including clinical signs of sudden cessation of blood circulation and/or breathing, requiring emergency and urgent medical care.</p> <p>PC - 12.2. Provide emergency medical care to patients in conditions that pose a threat to the life of patients, including clinical death (cessation of vital functions of the human body (circulation and (or) respiration). ID</p> <p>PC-12.3. Use drugs and medical products when providing emergency and urgent medical care to patients.</p> <p>ID PC-12.4. Perform basic cardiopulmonary resuscitation</p>	<p>- know the conditions that require emergency medical care, including clinical signs of sudden cessation of blood circulation and/or breathing, requiring emergency and urgent medical care.</p> <p>- know the principles of providing medical care to patients in conditions that pose a threat to the life of patients, including clinical death (cessation of vital functions of the human body (circulation and (or) respiration).</p> <p>- know the principles of cardiopulmonary resuscitation</p>	<p>- be able to recognize conditions that require emergency medical care, including clinical signs of sudden cessation of blood circulation and/or breathing, requiring emergency and urgent medical care.</p> <p>- be able to apply the principles of providing medical care to patients in conditions that pose a threat to the life of patients, including clinical death (cessation of vital functions of the human body (circulation and (or) respiration).</p>	<p>- possess the technology of providing medical care in an emergency, including clinical signs of sudden cessation of blood circulation and (or) breathing, requiring the provision of medical care in an emergency and urgent form.</p> <p>- to master the principles of providing medical care to patients in conditions that pose a threat to the life of patients, including clinical death (cessation of vital functions of the human body (circulation and (or) respiration).</p>

Sections of the discipline (modules) and the code of the competence being formed

No.	Section name	Code of formed competence
1	Asepsis and antiseptics	UC-1, GPC-1, GPC-4, GPC-5, GPC-7
2	Blood transfusion	UC-1, GPC-1, GPC-4, GPC-5, GPC -7
3	Traumatology	PC-1, PC-2, PC-5, PC-12
4	Purulent infection	GPC-4, GPC-5, GPC-7, PC-1, PC-2, PC-5
5	Examination of a surgical patient	UC-1, GPC-1, GPC-5, PC-1, PC-2, PC-11
6	Fundamentals of anesthesiology and resuscitation	UC-1, GPC-1, PC-1, PC-2, PC-5 PC-12,
7	Vascular disease	GPC-1, PC-1, PC-2, PC-5.

1.7 Stages of competencies development and description of assessment scales



1.8 Forms of training organization and types of control

Form of organization of students' training	Brief characteristic
Lectures	The lecture material contains key and most problematic issues of the discipline, which are most significant in the training of a specialist.
Practical classes	They are intended for the analysis (reinforcement) of theoretical principles and monitoring their assimilation with subsequent application of the acquired knowledge during the study of the topic.
Interactive forms of	- solving situational problems and exercises with subsequent discussion,

learning	<ul style="list-style-type: none"> - interactive survey, discussions; - performing creative tasks, - small group method, - online course of the discipline in the Moodle system , testing in the Moodle system .
Participation in the department's research work, student circle and conferences	<ul style="list-style-type: none"> - preparation of oral presentations and poster reports for presentation at a student club or scientific conference; - writing theses and abstracts on the chosen scientific field; - preparation of a literature review using educational, scientific, reference literature and Internet sources.
Types of control	Brief description
Incoming inspection	<p>Testing theoretical knowledge and practical skills developed by the general surgery program</p> <p>The entrance knowledge control includes:</p> <ul style="list-style-type: none"> - testing in the Moodle system (test of incoming knowledge control) - solving situational problems and exercises. <p>The results of the incoming inspection are systematized, analyzed and used by the teaching staff of the department to develop measures to improve and update the teaching methods of the discipline.</p>
Current control	<p>Current knowledge control includes:</p> <ul style="list-style-type: none"> - checking the solution of situational problems and exercises completed independently (extracurricular independent work); - assessment of the assimilation of theoretical material (oral survey and interview); - testing in the Moodle system on all topics of the discipline - individual assignments (practical and theoretical) for each topic of the discipline studied.
Interim assessment	The midterm assessment is represented by a test with a grade, which students take at the end of the 6th semester.

II STRUCTURE AND CONTENT OF THE DISCIPLINE

2.1 Scope of the discipline and types of educational activities

Type of academic work	Total hours	Semesters	
		5	6
Lectures	36	30	6
Clinical practical classes	84	42	42
Independent work	60	36	24
Exam	36		36
Total labor intensity in hours	216	108	108
Total workload in credit units	6	3	3

2.2 Thematic plan of lectures and their brief content

Item No.	Topics and content of lectures	Codes of formed competencies	Labor intensity (hour.)
1	History of surgery. Ethics and deontology in surgery. Medical ethics, medical thinking and new medical technologies. Medical errors in surgery. Iatrogenic pathology in surgery.	UC-1 GPC-1	2
2	Asepsis and antisepsis. Asepsis as a modern method of surgical infection prevention. Types and prevalence of surgical infection. Sources and routes of spread of surgical infection. Endogenous and exogenous routes of microbial contamination. Nosocomial (hospital) infection in a surgical hospital. Organizational forms of asepsis provision. Layout and principles of operation of the surgical department and operating block. Prevention of contact and implantation microbial contamination. Antisepsis. The concept of antisepsis.	UC-1 GPC-1 GPC-4 GPC-5 GPC-7	2
3	Types of antisepsis. Mechanical antisepsis. The concept of primary and secondary surgical treatment of wounds. Physical antisepsis. Methods of wound drainage. Gnotobiological isolation of wounds in surgery. Chemical antisepsis. Methods of using various chemical agents. Fundamentals of rational antiseptic chemotherapy. Biological antisepsis. Biological antisepsis agents. Mixed antisepsis. Principles of rational combination of various types of antisepsis.	UC-1 GPC-1 GPC-4 GPC-5 GPC-7	2
4	Bleeding. The concept of bleeding and blood loss, classification of bleeding. Hemorrhagic shock. Methods of temporary and final stopping of bleeding. The concept of bleeding and blood loss, classification of bleeding. Hemorrhagic shock. Evaluation of the severity of blood loss and determination of its magnitude. The body's response to blood loss. Complications of bleeding. Methods of temporary and final stopping of bleeding.	GPC-1 GPC-4 GPC-5 GPC-7 PC-1, PC-2, PC-5	2
5	Fundamentals of transfusiology. The place of transfusion therapy in modern surgery. Blood transfusion. The main antigen systems and the Rh factor system. Indications and contraindications for transfusion of blood and its components. The mechanism of action of transfused blood. Organization of the blood service in Russia.	GPC-4 GPC-5 GPC-7 PC-1, PC-2	2
6	Preparation and preservation of blood and its components. Blood transfusion. The main antigen systems and the Rhesus factor system. Indications and contraindications for blood transfusion blood components.	PC-5	
7	Dangers and complications of blood transfusion. Diagnosis, treatment and prevention	GPC-4, GPC-5,	2

8	of complications. Hemocorrectors. Basic principles of infusion therapy in surgery.	GPC-7, PC-1, PC-2, PC-3, PC-5, PC-11, PC-12	
9	General issues of trauma surgery. The concept of trauma, traumatism, and traumatism prevention. General principles of organizing pre-hospital and inpatient care. Complications and dangers of trauma. Soft tissue damage.	GPC-4, GPC-5, GPC-7, PC-1, PC-2, PC-5, PC-12	2
10	Fractures and dislocations. Classification, clinical features, diagnostics. First aid for fractures and dislocations. Modern methods of treating fractures, dislocations. Complications and outcomes of fractures.	GPC-4, GPC-5, GPC-7, PC-2, PC-5, PC-1	2
11	Chest and abdominal trauma. General principles of diagnosis and treatment of chest and abdominal trauma. Minimally invasive technologies in trauma treatment. Outcomes and principles of rehabilitation of patients with trauma.	GPC-4, GPC-5, GPC-7, PC-2, PC-1, PC-5, PC-12	2
12	Burns and frostbite. Modern principles of first aid for thermal injuries. Modern technologies in the treatment of burn injuries. Rehabilitation of patients with burns and frostbite.	GPC-4, GPC-5, GPC-7, PC-1 PC-2, PC-3, PC-5, PC-12	2
13	General issues of surgical infection. Purulent diseases of the skin and subcutaneous tissue. Mastitis of newborns, omphalitis, necrotic phlegmon of newborns.	GPC-4, GPC-5, GPC-7, PC-2, PC-3, PC-5	2
14	Purulent diseases of the hand, acute hematogenous osteomyelitis. Clinic, diagnostics, treatment.	GPC-4, GPC-5, GPC-7, PC-2, PC-1, PC-5	2
15	Preoperative period, surgical operation, postoperative period.	GPC-4, GPC-5, GPC-7, PK_ - 1, PK-2, PK-12, PK-11, PK-5	2
16	General anesthesia. The concept of pain relief. Classification, modern technologies of general anesthesia.	GPC-4, GPC-5, GPC-7, PK-1, PC-2, PC-12, PC-5, PC-11	2
17	Local anesthesia. Classification, blockades. Technique of their implementation, complications		
18	Fundamentals of resuscitation. Clinical death. Basic principles of diagnostics, provision of resuscitation care.	GPC-4, GPC-5, GPC -7, PC-2, PC-1, PC-5, PC-11, PC- 12	2
	Total hours		36

2.3 Thematic plan of practical classes and their content

No.	Name of the topics of practical classes	Contents of clinical practical classes	Codes of formed competencies and indicators of their achievements	Types of control	Labor intensity in hours
1	Asepsis. Sources of surgical infection. The concept of hospital-acquired infection. Layout and principles of operation of the operating unit, surgical department.	<p>Theoretical part: History of asepsis development, contribution of domestic scientists to asepsis development. Sources of hospital-acquired infection</p> <p>Practical part: Visits to the surgical department and operating block, analysis of the principles of organizing their work.</p>	UC-1: ID: 1.1, 1.2, 1.5. GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3	Frontal survey, solving situational problems, control of assimilation of practical skills.	3
2	Asepsis. Methods of treating the surgeon's hands before surgery and the surgical field.	<p>Theoretical part: Modern antiseptics for hand treatment, surgical field, treatment methods</p> <p>Practical part: Carrying out treatment of hands and surgical field</p>	UC-1: ID: 1.1, 1.2, 1.5. GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3	Frontal survey, control of assimilation of practical skills.	3
3	Asepsis. Surgical instruments, suture material. Methods of sterilization of surgical instruments, suture material.	<p>Theoretical part: Suture material, classification, sterilization of suture material. Complications (ligature fistulas) Surgical instruments, sterilization.</p> <p>Practical part: distribution of surgical instruments and suture material into groups</p>	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3	Examination home tasks, learning practical skills.	3
4	Antisepsis. Types: mechanical, physical.	<p>Theoretical part: History of antiseptics, contribution of domestic scientists to the development</p>	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5	Frontal survey, testing	3

		of antiseptics Practical part: Working with handouts, working in the dressing room, applying dressings to patients with various wounds	GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3		
5	Antisepsis. Types: chemical, biological. Final lesson.	Theoretical part: Modern chemicals used in surgery. Immunity. Types of immunity. Practical part: Working with handouts, working in the dressing room, dressing patients with various wounds. Analysis of case histories. Studying treatment regimens for patients with purulent processes.	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3	Rubicon control, testing	3
6	Bleeding. Clinic, diagnostics, treatment. Methods of stopping bleeding	Theoretical part: General and local symptoms of bleeding, modern methods of hemostasis Practical part: Analysis of patients with bleeding, application of a tourniquet, pressure bandages, digital pressure on arteries.	UC-1: ID: 1.1, 1.2, 1.5. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1, 2 PC-2: ID: 2.1, 2.1, 2.4. PC-5: ID: 5.1, 5.2.	Frontal survey, control of assimilation of practical skills.	3
7	Fundamentals of transfusiology. Determination of blood by the ABO system and Rh factor. Compatibility tests for transfusion of blood components.	Theoretical part: History of blood transfusion . The role of domestic scientists in the history of blood transfusion Practical part: Conducting pre-transfusion testing. Collection of blood transfusion systems.	UC-1: ID: 1.1, 1.2, 1.5. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3	Frontal survey, control of assimilation of practical skills.	3
8	Methods and ways of blood transfusion. Methods of blood	Theoretical part: Modern methods and techniques of	UC-1: ID: 1.1, 1.2, 1.5. GPC-4: ID: 4.1, 4.2, 4.3,	Frontal survey, control of	3

	collection. Donation.	blood transfusion Practical part: Working with handouts, working in the procedure room, wounds. Reviewing case histories of patients who received blood transfusions.	4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-11: ID: 11.1, 11.2, 11.3,	assimilation of practical skills.	
9	Hemocorrectors. Classification, indications, contraindications for transfusion. Formation of the choice of transfusion medium	Theoretical part: Modern hemocorrectors, indications for use Practical part: Working with handouts, working in the procedure room, wounds. Analysis of case histories of patients who received transfusions of various hemocorrectors.	UC-1: ID: 1.1, 1.2, 1.5. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-5, ID:5.1	Testing solution situational tasks	3
10	Complications during transfusion of blood and blood substitutes.	Theoretical part: Complications, diagnosis, causes, treatment of complications during blood transfusion. Practical part: Working with handouts, working in the procedure room, wounds. Analysis of case histories of patients who had complications during transfusion.	UC-1: ID: 1.1, 1.2, 1.5. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1	Intermediate control, testing	3
11	Trauma, traumatism, dangers and complications of injuries. Soft tissue damage, crush syndrome.	Theoretical part: Types of injuries, clinical picture, diagnostics, treatment . Practical part: Working with handouts, working in the trauma department. Reviewing case histories of patients who have received injuries.	UC-1: ID: 1.1, 1.2, 1.5. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-11: ID: 11.1,11.2	Frontal survey, situational solutions tasks	3
12	Fractures and dislocations. Clinic, diagnostics, treatment.	Theoretical part: Types of fractures, dislocations, clinical	UC-1: ID: 1.1, 1.2, 1.5. GPC-4: ID: 4.1, 4.2, 4.3,	Frontal survey, control of	3

	<p>Diagnostics, first aid. Treatment methods.</p>	<p>presentation, diagnostics, treatment . Practical part: Working with handouts, working in the trauma department. Applying transport splints.</p>	<p>4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-12: ID: 12.1, 12.2, 12.3,12.4.</p>	<p>assimilation of practical skills.</p>	
13	<p>Chest and abdominal injuries. Clinic, diagnostics, treatment. First aid, complications.</p>	<p>Theoretical part: Types of chest and abdominal injuries. Clinic, diagnostics, treatment . Practical part: Working with handouts, working in the trauma department. Reviewing case histories of patients with chest and abdominal injuries.</p>	<p>UC-1: ID: 1.1, 1.2, 1.5. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-12: ID: 12.1, 12.2, 12.3,12.4 .</p>	<p>Frontal survey, control of assimilation of practical skills.</p>	3
14	<p>Thermal injuries Clinic, diagnostics, treatment. First aid, complications.</p>	<p>Theoretical part: Types of thermal injuries. Clinic, diagnostics, treatment . Practical part: Working with handouts, working in the thermal department. Analysis of case histories of patients with thermal injuries.</p>	<p>UC-1: ID: 1.1, 1.2, 1.5. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-12: ID: 12.1, 12.2, 12.3,12.4.</p>	<p>Frontal survey, control of assimilation of practical skills.</p>	3
15	<p>General issues of purulent infection. Purulent diseases of the skin and subcutaneous</p>	<p>Theoretical part: Features of the course of modern surgical infection. General principles of</p>	<p>GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5</p>	<p>Frontal survey, situational solutions</p>	3

	tissue. Classification, clinical features, diagnostics, treatment.	diagnosis and treatment. Practical part: Working with handouts, working in the department. Analysis of case histories of patients with purulent processes	GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1	tasks	
16	Purulent diseases of the hand. Classification, clinical picture, diagnostics, treatment.	Theoretical part: Peculiarities of the course of purulent processes of the hand Practical part: Working with handouts, working in the department. Analysis of case histories of patients with purulent processes of the hand.	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1	Frontal survey, solving situational problems	3
17	Acute hematogenous osteomyelitis. Classification, clinical features, diagnostics, treatment.	Theoretical part: Peculiarities of the course of purulent processes of tubular bones. Types of osteomyelitis. Modern methods of treatment. Practical part: Working with handouts, working in the department. Analysis of case histories of patients with osteomyelitis.	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1	Frontal survey, situational solutions tasks	3
18	Surgical sepsis Classification, clinical features, diagnostics, treatment.	Theoretical part: Features of the course of sepsis. Types. Modern methods of treatment. Practical part: Working with handouts, working in the department. Reviewing case histories of patients with sepsis.	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1	Frontal survey, situational solutions tasks	3
19	Clostridial and non-clostridial	Theoretical part:	GPC-1: ID: 1.1, 1.2, 1.3.	Frontal survey,	3

	anaerobic infection. Classification, clinical features, diagnostics, treatment.	Features of the course of clostridial and non-clostridial infections. Types. Modern methods of treatment. Practical part: Working with handouts, working in the department. Analysis of case histories with clostridial and non-clostridial infections.	GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1	situational solutions tasks	
20	Wounds. Clinic, diagnostics, treatment of fresh wounds.	Theoretical part: Peculiarities of the course of purulent wounds in children. Types of wounds. Modern methods of wound treatment Practical part: Working with handouts, working in the department. Reviewing case histories of patients with wounds.	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1	Frontal survey, situational solutions tasks	3
21	Purulent wounds. Classification, clinical features, diagnostics, treatment. Final lesson.	Theoretical part: Peculiarities of the course of purulent wounds in people of different ages. Types of wounds. Modern methods of wound treatment Practical part: Working with handouts, working in the department. Reviewing case histories of patients with wounds.	PC-4 GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1	Frontal survey, situational solutions tasks	3
22	Examination of a surgical patient	Theoretical part: Peculiarities of examination of surgical patients Practical part: Working with handouts, working in the department. Analysis of patients' case histories	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2	Examination home tasks	3

			PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1 PC-11: ID:11.1, 11.2,11.3		
23	Preoperative period. Surgical operation. Definition, stages of surgical intervention, complications.	Theoretical part: Preparation of pediatric surgical patients for surgery, minimally invasive technologies in the treatment of patients Practical part: Working with handouts, working in the department. Reviewing patients' case histories.	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1 PC-11: ID:11.1, 11.2,11.3	Frontal survey, situational solutions tasks	3
24	Postoperative period. Complications in the postoperative period.	Theoretical part: Modern technologies for patient care in the postoperative period. Practical part: Working with handouts, working in the department. Reviewing case histories of patients in the postoperative period.	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1 PC-11: ID:11.1, 11.2,11.3	Frontal survey, situational solutions tasks. Testing	3
25	General anesthesia. Definition, classification. Concept of anesthetic care. Complications.	Theoretical part: Modern technologies for pain relief Practical part: Working with handouts, working in the department. Analysis of medical histories of operated patients	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-1: ID: 1.1,1,2 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1 PC-11: ID:11.1, 11.2,11.3	Frontal survey, situational solutions tasks	3
26	Local anesthesia Definition,	Theoretical part:	GPC-1: ID: 1.1, 1.2, 1.3.	Examination	3

	classification. Complications	Types of local anesthesia. The concept of anesthetic care. Practical part: Working with handouts, working in the department. Analysis of medical histories of operated patients	GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1 PC-11: ID:11.1, 11.2,11.3	home tasks	
27	Acute venous blood flow disorders, ulcers, fistulas. Classification, clinical picture, diagnostics, treatment.	Theoretical part: Features of congenital and acquired arterial and venous pathology Practical part: Working with handouts, working in the department. Analysis of case histories with vascular pathology.	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1 PC-11: ID:11.1, 11.2,11.3	Frontal survey, situational solutions tasks	3
28	Tumors. Classification, clinical features, diagnostics, treatment.	Theoretical part: Peculiarities of the course of oncopathologies Practical part: Working with handouts, working in the department. Analysis of case histories with oncological pathology.	GPC-1: ID: 1.1, 1.2, 1.3. GPC-4: ID: 4.1, 4.2, 4.3, 4.4, 4.5 GPC-5: ID: 5.1, 5.2, 5.3, 5.6, 5.8 GPC-7: ID: 7.1, 7.2, 7.3 PC-2: ID: 2.1, 2.2, 2.4. PC-5: ID:5.1 PC-11: ID:11.1, 11.2,11.3	Frontal survey, situational solutions tasks	3
	Total hours				84

2.4. Interactive forms of learning

In order to activate students' cognitive activity, interactive teaching methods (discussions, interactive questioning using the "chain" method, test control, etc.) are widely used in practical classes.

No	Topic of the practical lesson	Labor intensity in hours	Interactive form training	Labor intensity in hours (%)
1	Asepsis. Operation of the operating unit.	2.25	Interactive survey using the "chain" method Test control	40 minutes (0.66 hours) / 23%
2	Asepsis. Methods of treating the surgeon's hands and the surgical field	2.25	Interactive survey using the "chain" method. Test control	40 minutes (0.66 hours) / 23%
3	Surgical instruments, suture material	2.25	Interactive survey using the "chain" method	40 minutes (0.66 hours) / 23%
4	Mechanical and physical antisepsis	2.25	Interactive survey using the "chain" method	40 minutes (0.66 hours) / 23%
5	Chemical and biological antisepsis	2.25	Test control	40 minutes (0.66 hours) / 23%
6	Methods for determining blood group and Rh factor Methods and techniques of blood transfusion, tests during blood transfusion	2.25	Interactive survey using the method of "work in small groups"	20 minutes (0.33 hours) / 11.5%
7	Blood collection. Hemocorrectors	2.25	Interactive survey using the method of "work in small groups"	20 minutes (0.33 hours) / 11.5%
8	Complications during blood transfusion and hemocorrectors.	2.25	Interactive survey using the method of "work in small groups"	20 minutes (0.33 hours) / 11.5%
10	Methods of stopping bleeding. Final lesson	2	Test control	40 minutes (0.66 hours) / 23%
11	Chronic and acute venous circulation disorders	2.25	Interactive survey using the method "work in small groups"	40 minutes (0.66 hours) / 23%
12	Trophic ulcers, fistulas.	2.25	Interactive survey - solving situational problems tasks	40 minutes (0.66 hours) / 23%
13	General questions of oncology	2.25	Interactive survey - solving situational problems tasks	40 minutes (0.66 hours) / 23%
14	Surgical infection. General issues of diagnosis and treatment.	2.25	Interactive survey using the "chain" method	40 minutes (0.66 hours) / 23%
15	Purulent diseases of the skin and subcutaneous tissue fibrin, neonatal mastitis, omphalitis.	2.25	Interactive survey using the method "work in small groups"	20 minutes (0.33 hours) / 11.5%
16	Purulent diseases of the	2.25	Interactive survey using the	40 minutes

	hand. Acute hematogenous osteomyelitis.		fishbone method	(0.66 hours) / 23%
17	Surgical sepsis	2.25	In Interactive survey - solving situational problems tasks	40 minutes (0.66 hours) / 23%
18	Anaerobic clostridial and non-clostridial infection	2.25	Interactive survey - solving situational problems tasks	40 minutes (0.66 hours) / 23%
19	Wounds. Wound process. Treatment of fresh wounds.	2.25	Interactive survey using the fishbone method	40 minutes (0.66 hours) / 23%
20	Purulent wounds. Final lesson on purulent infection.	2	Interactive survey using the fishbone method	40 minutes (0.66 hours) / 23%
21	Methodology for examining a surgical patient	2.25	Interactive survey using the "conference" method	40 minutes (0.66 hours) / 23%
22	Preoperative Period. Surgical operation.	2.25	Interactive survey using the "business game" method	40 minutes (0.66 hours) / 23%
23	By Postoperative Period, postoperative complications.	2.25	Interactive survey using the "business game" method	40 minutes (0.66 hours) / 23%
24.	General anesthesia	2.25	Interactive survey using the "business game" method	40 minutes (0.66 hours) / 23%
25	Local anesthesia.	2.25	Interactive survey using the "business game" method	
24	Fundamentals of resuscitation.	2.25	Interactive	40 minutes (0.66 hours) / 23%
26	Trauma. Traumatic shock. Crush syndrome.	2.25	Interactive survey using the "conference" method	40 minutes (0.66 hours) / 23%
27	Fractures and dislocations	2.25	Interactive survey using the "business game" method	40 minutes (0.66 hours) / 23%
29	Burns, burn disease. Clinic, diagnostics, treatment	2.25	Interactive survey - solving situational problems	40 minutes (0.66 hours) / 23%
30	Frostbite. Final lesson on traumatology.	2.25	Testing, written control.	40 minutes (0.66 hours) / 23%

2.5 Criteria for assessing students' knowledge

The assessment of learning outcomes is carried out in accordance with the "Regulations on the system of assessing the learning outcomes of students of the Federal State Budgetary Educational Institution of Higher Education Amur State Medical Academy of the Ministry of Health of the Russian Federation. The basis for determining the level of knowledge, skills, and abilities are the assessment criteria - completeness and correctness:

- correct, precise answer;
- correct but incomplete or imprecise answer;
- incorrect answer;
- no answer.

When assigning marks, the classification of errors and their quality are taken into account:

- gross errors;

- similar errors;
- minor errors;
- shortcomings.

The success of students in mastering the topics of the discipline "General Surgery" is determined by the quality of mastering knowledge, skills and practical abilities; the assessment is given on a five-point scale: "5" - excellent, "4" - good, "3" - satisfactory, "2" - unsatisfactory.

Criteria for assessing learning outcomes

No.	Topic of the practical lesson	Theoretical part	Practical part	Overall rating
1	Asepsis. Sources of surgical infection. The concept of hospital-acquired infection. Layout and principles of operation of the operating unit, surgical department.	2-5	2-5	2-5
2	Asepsis. Methods of treating the surgeon's hands before surgery and the surgical field.	2-5	2-5	2-5
3	Asepsis. Surgical instruments, suture material. Methods of sterilization of surgical instruments, suture material.	2-5	2-5	2-5
4	Antisepsis. Types: mechanical, physical.	2-5	2-5	2-5
5	Antisepsis. Types: chemical, biological. Final lesson.	2-5	2-5	2-5
	Control lesson on the section "Asepsis and Antisepsis"			
	Average score	3.9-4.5	3.9-4.5	3.9-4.5
6	Bleeding. Clinic, diagnostics, treatment. Methods of stopping bleeding	2-5	2-5	2-5
7	Fundamentals of transfusiology. Determination of blood by the ABO system and Rh factor. Compatibility tests for transfusion of blood components.	2-5	2-5	2-5
8	Methods and ways of blood transfusion. Methods of blood collection. Donation.	2-5	2-5	2-5
9	Hemocorrectors. Classification, indications, contraindications for transfusion. Formation of the choice of transfusion medium	2-5	2-5	2-5
10	Complications of blood and blood substitute transfusions	2-5	2-5	2-5
	Control lesson on the section "Bleeding"			
	Average score	3.9-4.5	3.9-4.5	3.9-4.5
11	Trauma, traumatism, dangers and complications of injuries. Soft tissue damage, crush syndrome.	2-5	2-5	2-5
12	Fractures and dislocations. Clinic, diagnostics, treatment. Diagnostics, first aid. Treatment methods.	2-5	2-5	2-5
13	Chest and abdominal injuries. Clinic,	2-5	2-5	2-5

	diagnostics, treatment. First aid, complications.			
14	Thermal injuries Clinic, diagnostics, treatment. First aid, complications.	2-5	2-5	2-5
	Control lesson on the section "Traumatology"			
	Average score	3.9-4.5	3.9-4.5	3.9-4.5
15	General issues of purulent infection. Purulent diseases of the skin and subcutaneous tissue. Classification, clinical features, diagnostics, treatment.	2-5	2-5	2-5
16	Purulent diseases of the hand. Classification, clinical picture, diagnostics, treatment.	2-5	2-5	2-5
17	Acute hematogenous osteomyelitis. Classification, clinical features, diagnostics, treatment.	2-5	2-5	2-5
18	Surgical sepsis Classification, clinical features, diagnostics, treatment.	2-5	2-5	2-5
19	Clostridial and non-clostridial anaerobic infection. Classification, clinical features, diagnostics, treatment.	2-5	2-5	2-5
20	Wounds. Clinic, diagnostics, treatment of fresh wounds.	2-5	2-5	2-5
21	Purulent wounds. Classification, clinical features, diagnostics, treatment.	2-5	2-5	2-5
	Control lesson on the section "Purulent infection"	3.9-4.5	3.9-4.5	3.9-4.5
	Average score			
22	Examination of a surgical patient	2-5	2-5	2-5
23	Preoperative period. Surgical operation. Definition, stages of surgical intervention, complications.	2-5	2-5	2-5
24	Postoperative period. Complications in the postoperative period.	2-5	2-5	2-5
25	General anesthesia. Definition, classification. Concept of anesthetic care. Complications.	2-5	2-5	2-5
	Control lesson on the section "Examination and treatment of a surgical patient"			
	Average score	3.9-4.5	3.9-4.5	3.9-4.5
26	Local anesthesia Definition, classification. Complications	2-5	2-5	2-5
28	Acute venous blood flow disorders, ulcers, fistulas. Classification, clinical picture, diagnostics, treatment.	2-5	2-5	2-5
29	Tumors. Classification, clinical features, diagnostics, treatment.	2-5	2-5	2-5
	Control lesson on the section "Pain"			

	relief, tumors"			
	Average score	3.9-4.5	3.9-4.5	3.9-4.5

Rating scales for ongoing knowledge control

The success of students in mastering the discipline (topics/sections), practical skills and abilities is characterized by a qualitative assessment and is assessed on a 5-point system: "5" - excellent, "4" - good, "3" - satisfactory, "2" - unsatisfactory.

The conversion of the mark into a point scale is carried out according to the following scheme:

Quality of development	Mark on a 5-point scale
90 - 100%	"5"
80 - 89%	"4"
70 - 79%	"3"
less than 70%	"2"

Incoming inspection

Conducted at the first lesson, includes: solving problems and exercises; testing in the Moodle system. The test control includes 100 questions on the course of disciplines (anatomy, physiology, histology), studied in the 1-2 courses of the ASMA education.

Current control

Current control includes initial and final control of knowledge.

Initial control is carried out by the teacher at the beginning of each lesson in the form of a frontal survey, solving problems and exercises, and testing.

Final control - includes control over the technique of performing the patient examination, manipulations, protocol preparation, testing in the Moodle system

The assessment during the current knowledge control is given on the day of the lesson, as the arithmetic mean result for all types of activities provided for in this lesson of the discipline's work program. Based on the assessments for the current control of knowledge, skills, and abilities in practical classes, the average score of current academic performance is calculated, which is recorded in the educational (electronic) journal and taken into account during midterm assessment.

Criteria for assessing the oral response

"5" (excellent) – the student demonstrates deep and complete knowledge of the educational material, does not allow inaccuracies or distortions of facts when presenting, presents the material in a logical sequence, is well oriented in the presented material, and can provide justification for the judgments expressed.

"4" (good) – the student has mastered the educational material in full, is well oriented in the educational material, presents the material in a logical sequence, but makes inaccuracies when answering.

"3" (satisfactory) – the student has mastered the basic principles of the topic of the practical lesson, but when presenting the educational material, he/she makes inaccuracies, presents it incompletely and inconsistently, requires leading questions from the teacher to present it, and has difficulty substantiating the judgments expressed.

"2" (unsatisfactory) – the student has fragmented and unsystematic knowledge of the educational material, is unable to distinguish between the main and the secondary, makes mistakes in defining basic concepts, distorts their meaning, and cannot independently present the material.

Assessment criteria for the practical part

"5" (excellent) – the student has fully mastered the practical skills and abilities provided for by the course work program.

"4" (good) – the student has fully mastered the practical skills and abilities provided for in the course program, but makes some inaccuracies.

"3" (satisfactory) – the student has only some practical skills and abilities.

“2” (unsatisfactory) – the student demonstrates the performance of practical skills and abilities with gross errors.

Criteria for assessing independent extracurricular work:

- the level of student mastery of the educational material;
- the completeness and depth of general educational concepts, knowledge and skills on the topic being studied, to which this independent work relates;
- development of universal, general professional and professional competencies (ability to apply theoretical knowledge in practice).
- the problems were solved correctly, the exercises were completed, and the test assignments were answered accurately – “passed”.
- problems were not solved correctly, exercises were not completed correctly, inaccurate answers were given to test assignments – “failed”.

Preparation of the abstract:

- the abstract is written quite competently, the material is presented in detail, the abstract is formatted according to the requirements – “passed”.
- the abstract is not written correctly enough, the material is not presented in detail, the abstract design does not meet the requirements – “failed”.

A student who has not prepared an abstract or who has received a “fail” for it will not be admitted to the final midterm assessment in the discipline “General Surgery”.

Working off disciplinary debts.

If a student misses a class for a valid reason, he/she has the right to make it up and receive the maximum grade provided for by the course work program for that class. A valid reason must be documented.

If a student misses a class for an unjustified reason or receives a "2" mark for all activities in the class, he/she is required to make it up. In this case, the mark received for all activities is multiplied by 0.8.

If a student is excused from a class at the request of the dean's office (participation in sports, cultural and other events), then he is given a grade of "5" for this class, provided that he submits a report on the completion of mandatory extracurricular independent work on the topic of the missed class.

Criteria for assessing midterm assessment.

Midterm assessment (exam) is designed to assess the degree of achievement of planned learning outcomes upon completion of the study of a discipline and allows for an assessment of the level and quality of its mastery by students.

The students' success in mastering the discipline is assessed on a 5-point scale: “5” – excellent, “4” – good, “3” – satisfactory, “2” – unsatisfactory.

"Excellent" - for the depth and completeness of mastery of the content of the educational material, in which the student easily navigates, for the ability to connect theoretical questions with practical ones, express and justify their judgments, correctly and logically present the answer; when testing, allows up to 10% of erroneous answers. Practical skills and abilities provided for by the working program of the discipline are fully mastered.

"Good" - the student has fully mastered the educational material, is oriented in it, correctly states the answer, but the content and form have some inaccuracies; during testing allows up to 20% of erroneous answers. Completely practical skills and abilities provided by the working program of the discipline, but allows some inaccuracies

"Satisfactory" - the student has mastered the knowledge and understanding of the main provisions of the educational material, but presents it incompletely, inconsistently, does not know how to express and justify his/her judgments; during testing, allows up to 30% of erroneous answers. Has only some practical skills and abilities.

"Unsatisfactory" - the student has fragmented and unsystematic knowledge of the educational material, is unable to distinguish between the main and secondary, makes mistakes in

defining concepts, distorts their meaning, presents the material in a disorderly and uncertain manner, and makes more than 30% of erroneous answers during testing. Performs practical skills and abilities with gross errors.

A student can claim to receive an "excellent" grade automatically if he/she has won a prize in disciplinary or interdisciplinary Olympiads (university, regional) and has an average grade for the current academic performance of at least 4.8 points . A student can refuse the "automatic" grade and take the test together with the group on a general basis.

Interim assessment is carried out through a 3-stage delivery system:

1. Test control in the Moodle system .
2. Passing practical skills (competencies).
3. Answers to exam tickets.

During the midterm assessment, the final grade is determined as the arithmetic mean result for all stages of the assessment.

Evaluation criteria

Quality of development	Mark on a 5-point scale
90 - 100%	"5"
80 - 89%	"4"
70 - 79%	"3"
less than 70%	"2"

2.6 Independent work of students: in-class and out-of-class.

The organization of independent classroom work of students is carried out with the help of methodological instructions for students, which contain educational goals, a list of the main theoretical questions for study, a list of practical work and the methodology for conducting it, instructions for the presentation of the results obtained, their discussion and conclusions, assignments for self-control with standard answers, a list of recommended literature.

From 1/4 to 1/2 of the practical lesson time is allocated for independent work of students: conducting research, recording results, discussing them, formulating conclusions, completing individual assignments. The preparatory stage, or the formation of an approximate basis for actions, begins for students outside of class time when preparing for the practical lesson, and ends in class.

All subsequent stages are carried out in class. The stage of materialized actions (solving problems using an algorithm or without an algorithm, with an unknown answer in advance) is carried out independently. The teacher, if necessary, provides consultation, provides assistance and simultaneously monitors the quality of students' knowledge and their ability to apply existing knowledge to solve assigned problems.

No.	Section Topic	Time for student preparation for the lesson	Forms of extracurricular independent work of a student	
			Mandatory, the same for all students	At the student's choice
1	Asepsis and antiseptic	8	Preparation on theoretical issues (reading basic and additional literature, giving lectures, solving test control, reviewing)	Computer presentations, making a tablet, abstracts for classes: 1. Founder of asepsis and antiseptics 2. Hospital infection 3. Modern methods of
2	Transfusion blood, components	8	Preparation on theoretical issues (reading basic and additional literature, giving	

	blood,		lectures, solving test control, reviewing)	hemostasis in surgery. 4. New approaches to infusion therapy 5. Modern technologies in treatment thermal injuries. 6. Features of the course of purulent processes in anaerobic infection. 7. Minimally invasive technologies in the treatment of surgical patients. 8. The place of the Central Surgical Center in providing assistance to surgical patients. 9. Use of robots in providing assistance to surgical patients.
3	Basics traumatology	8	Preparation on theoretical issues (reading basic and additional literature, giving lectures, solving test control, reviewing)	
4	Purulent diseases of soft tissues in children.	8	Preparation on theoretical issues (reading basic and additional literature, giving lectures, solving test control, reviewing)	
5	Pain relief and resuscitation	5	Preparation on theoretical issues (reading basic and additional literature, giving lectures, solving test control, reviewing)	
6	Stages of providing assistance to patients	5	Preparation on theoretical issues. The following can be used as the main forms of extracurricular independent work: studying the main and additional educational and scientific literature; solving situational problems, test assignments. Work in an online classroom. preparing oral reports (reports), writing essays, preparing presentations. This type of educational activity should be based on the activity, initiative, consciousness, and independent work of students. Studying the main and additional literature, giving lectures, solving test control, and writing abstracts.	
7	Pre- and postoperative period, surgical operation	6	Preparation on theoretical issues (reading basic and additional literature, giving lectures, solving test control, reviewing)	
		48 hours		
Total 60 hours				

2.7. Research (project) work

Research work of students is a mandatory section of the discipline. Research work is aimed at the comprehensive formation of general cultural, professional, and professional competencies of students. It involves studying specialized literature and other scientific and technical information on

the achievements of domestic and foreign science and technology in the relevant field of knowledge, participation in scientific research, etc. The topics of research can be chosen by students independently in consultation with the teacher, or from the list below (taking into account the scientific direction of the department).

Sample topics of students' research work

1. Hospital-acquired infection in surgical hospitals.
2. Modern methods of hemostasis.
3. Minimally invasive technologies in surgery.
4. Robots in the service of surgeons.

Criteria for assessing students' research work:

- the material on the research results in the report is presented in detail, the specialized literature is well-developed, scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge is studied - "passed".

- the material on the results of the research in the report is not presented correctly enough, the special literature is poorly studied, scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge is poorly studied - "not accepted".

III . EDUCATIONAL, METHODOLOGICAL, MATERIAL, TECHNICAL AND INFORMATION SUPPORT OF THE DISCIPLINE

3.1 Main literature

1. General surgery: textbook / S. V. Petrov, A. Yu. Semenov, O. V. Fionik [et al.]. - 4th ed., revised and enlarged. - Moscow: GEOTAR-Media, 2023. - 832 p. - ISBN 978-5-9704-7917-9. - Electronic version is available on the website of the Electronic Library System "Student Consultant": [site]. URL: <https://www.studentlibrary.ru/book/ISBN9785970479179.html>
2. General surgery: textbook / edited by N. V. Merzlikin. - Moscow: GEOTAR-Media, 2023. - 1016 p. - ISBN 978-5-9704-7806-6, DOI: 10.33029/9704-7806-6-OBX-2023-1-1016. - Electronic version is available on the website of the Electronic Library System "Student Consultant": [site]. URL: <https://www.studentlibrary.ru/book/ISBN9785970478066.html>
3. Gostishchev, V.K. General surgery: textbook / V.K. Gostishchev. - 5th ed. , rev. and additional - Moscow: GEOTAR-Media, 2022. - 736 p. - ISBN 978-5-9704-7027-5. - Text: electronic // EBS "Student Consultant": [website]. - URL: <https://www.studentlibrary.ru/book/ISBN9785970470275.html>
4. General surgery. Guide to practical classes: textbook / edited by N. V. Merzlikin. - Moscow: GEOTAR-Media, 2023. - 504 p. - ISBN 978-5-9704-7314-6 . - Electronic version is available on the website of the electronic library system "Student Consultant": [site]. URL: <https://www.studentlibrary.ru/book/ISBN9785970473146.html>

3.2 Further reading:

1. Kuznetsov, N. A. Clinical surgery: examination of the patient / N. A. Kuznetsov. - Moscow: GEOTAR-Media, 2020. - 160 p. - ISBN 978-5-9704-5488-6. - Text: electronic // EBS "Student Consultant": [website]. - URL:
2. Golub, V. A. Asepsis and antisepsis: a textbook / V. A. Golub, O. A. Kosivtsov. - Volgograd: VolgGMU, 2021. - 88 p. - ISBN 978-5-9652-0689-6. - Text: electronic // Lan: electronic library system. - URL: <https://e.lanbook.com/book/250091>
3. Kurlaev, P. P. Lectures on General Surgery: a tutorial / P. P. Kurlaev. - Orenburg: OrSMU, 2021. - 707 p. - Text: electronic // Lan: electronic library system. - URL: <https://e.lanbook.com/book/258008>

4. Surgical instruments: a tutorial / A. V. Volkov, G. M. Rynkach, N. D. Novikov [et al.]; edited by A. V. Volkov. - Novosibirsk: NGMU, 2019. - 80 p. - Text: electronic // Lan: electronic library system. - URL: <https://e.lanbook.com/book/145007>

3.3. Educational and methodological materials prepared by the department staff

1. Volodchenko N.P. Asepsis and antiseptics Blagoveshchensk, 2012
2. Volochenko N.P. Transfusion of components, blood products and hemocorrectors. Blagoveshchensk, 2013
3. Volodchenko N.P. Wound treatment. Blagoveshchensk, 2014.
4. Volochenko N.P. Anesthesia in surgery. Blagoveshchensk, 2015
5. Volodchenko N.P. Diagnostics and treatment of bleeding. Blagoveshchensk, 2016
6. Volodchenko N.P. Abdominal trauma. Blagoveshchensk, 2017
7. Volodchenko N.P. Minimally invasive technologies in abdominal surgery. Blagoveshchensk, 2018
8. Volodchenko N.P. Purulent surgical infection and diabetes mellitus Blagoveshchensk, 2020
9. Volodchenko N.P. Diagnostics and treatment of gastrointestinal bleeding. Blagoveshchensk, 2021
10. Volochenko N.P. Diagnostics and treatment of complications of gastric ulcer and duodenal ulcer. Blagoveshchensk, 2024.-111s.

3.4. Equipment used in teaching students

No.	Name	Quantity
1	Personal computer	3
2	Video projector.	1
3	Slide projector.	2
4	Tables	68
5	Stands	51
6	Tablets	12
7	Albums	3
8	Sets of situational tasks	8
9	Dummies	7
10	Textbooks on various sections of general surgery	85

List of albums, stands, tables of handouts used in training

Albums

- 1 Methods of diagnostics of surgical diseases
2. Treatment of fractures

Stands

1. Drainage methods
2. Tumors
3. Hand treatment for a surgeon
4. Processing of the surgical field
5. Blood transfusion
6. Hemocorrectors
7. Resuscitation
8. Purulent diseases
9. Fractures, transport immobilization
11. Surgical instruments

Tables

1. Hand treatment for a surgeon
2. Processing of the surgical field
3. Burns
4. Frostbite
5. Fractures
6. Purulent soft tissue infection
7. Purulent diseases of the hand

3.5. Professional databases, information and reference systems, electronic educational resources.

Resource name	Resource Description	Access	Resource address
Electronic library systems			
"Student consultant. Electronic library of the medical university"	For students and teachers of medical and pharmaceutical universities. Provides access to electronic versions of textbooks, teaching aids and periodicals.	Remote access after registration under the university profile	https://www.studentlibrary.ru/
Reference and information system "MedBaseGeotar".	The reference and information system "MedBaseGeotar" is intended for practicing medical specialists, researchers, teachers, postgraduate students, residents, senior students, and healthcare managers for the rapid search, selection, and reading of medical literature necessary for work in a single data source.	Remote access after registration under the university profile	https://mbasegeotar.ru/pages/index.html
Electronic library system "Bookup"	Large medical library - information and educational platform for the joint use of electronic educational, educational and methodological publications of medical universities of Russia and the CIS countries	Remote access after registration under the university profile	https://www.books-up.ru/
EBS "Lan"	Network electronic library of medical universities - an electronic database of educational and scientific works on medical topics, created for the purpose of implementing network forms of professional educational programs, open access to educational materials for partner universities	Remote access after registration under the university profile	https://e.lanbook.com/
Scientific electronic library "CyberLeninka"	CyberLeninka is a scientific electronic library built on the paradigm of open science (Open Science), the main tasks of which are the popularization of science and scientific activity, public control of the quality of scientific	free access	https://cyberleninka.ru/

	publications, the development of interdisciplinary research, a modern institute of scientific review, increasing the citation of Russian science and building a knowledge infrastructure. Contains more than 2.3 million scientific articles.		
Oxford Medicine Online	A collection of Oxford medical publications, bringing together over 350 titles into a single, cross-searchable resource. Publications include The Oxford Handbook of Clinical Medicine and The Oxford Textbook of Medicine, both of which are continually updated electronically.	free access	http://www.oxfordmedicine.com
Human Biology Knowledge Base	Reference information on physiology , cell biology , genetics , biochemistry , immunology , pathology . (Resource of the Institute of Molecular Genetics of the Russian Academy of Sciences.)	free access	http://humbio.ru/
Medical online library	Free reference books, encyclopedias, books, monographs, abstracts, English-language literature, tests.	free access	https://www.medlib.ru/library/library/books
Information systems			
Clinical Guidelines Rubricator	A resource of the Russian Ministry of Health that contains clinical recommendations developed and approved by medical professional non-profit organizations of the Russian Federation, as well as methodological guidelines, nomenclatures and other reference materials.	Link to download the application	https://cr.minzdrav.gov.ru/#/
Federal Electronic Medical Library (FEMB)	The Federal Electronic Medical Library is part of the unified state information system in the field of healthcare as a reference system . FEMB was created on the basis of the funds of the Central Scientific Medical Library named after I.M. Sechenov.	free access	https://femb.ru/
Russian Medical Association	Professional Internet resource. Objective: to promote effective professional activity of medical personnel. Contains the charter, personnel, structure, rules of entry, information about the Russian Medical Union.	free access	http://www.rmass.ru/
Web-medicine	The site presents a catalog of professional medical resources, including links to the most authoritative subject sites, journals, societies, as well as useful documents and programs. The site is intended for doctors, students, employees of medical universities and scientific institutions.	free access	http://webmed.irkutsk.ru/

Databases			
World Health Organization	The site contains news, statistics on countries that are members of the World Health Organization, fact sheets, reports, WHO publications and much more.	free access	http://www.who.int/ru/
Ministry of Science and Higher Education of the Russian Federation	The website of the Ministry of Science and Higher Education of the Russian Federation contains news, newsletters, reports, publications and much more	free access	http://www.minobrnauki.gov.ru
Ministry of Education of the Russian Federation	The website of the Ministry of Education of the Russian Federation contains news, newsletters, reports, publications and much more	free access	https://edu.gov.ru/
Federal portal "Russian education"	A single window for access to educational resources. This portal provides access to textbooks on all areas of medicine and health care.	free access	http://www.edu.ru/
Polpred.com	Electronic library system Business media. Media Review	free access	https://polpred.com/news
Bibliographic databases			
Database "Russian Medicine"	It is created in the Central Scientific and Methodological Library and covers the entire collection, starting from 1988. The database contains bibliographic descriptions of articles from domestic journals and collections, dissertations and their abstracts, as well as domestic and foreign books, collections of institute proceedings, conference materials, etc. Thematically, the database covers all areas of medicine and related areas of biology, biophysics, biochemistry, psychology, etc.	free access	https://rucml.ru/
PubMed	A text database of medical and biological publications in English. The PubMed database is an electronic search engine with free access to 30 million publications from 4,800 indexed journals on medical topics. The database contains articles published from 1960 to the present day, including information from MEDLINE, PreMEDLINE, NLM. Each year, the portal is replenished with more than 500 thousand new works.	free access	https://pubmed.ncbi.nlm.nih.gov/
eLIBRARY.RU	Russian information portal in the field of science, technology, medicine and education, containing abstracts and full texts of more than 13 million	Full functionality of the site is	http://elibrary.ru/defaultx.asp

	scientific articles and publications. The eLIBRARY.RU platform provides electronic versions of more than 2,000 Russian scientific and technical journals, including more than 1,000 open access journals.	available after registration	
Electronic library of dissertations (RSL)	Currently, the Electronic Library of Dissertations of the Russian State Library contains more than 919,000 full texts of dissertations and abstracts.	free access	http://diss.rsl.ru/?menu=disscatalog/
Medline.ru	Medical and biological portal for specialists. Biomedical journal.	free access	https://journal.scbmt.ru/jour/index
Official Internet portal of legal information	The single official state information and legal resource in Russia	free access	http://pravo.gov.ru/

3.6. Licensed and freely distributed software used in the educational process

List of software (commercial software products)

No. p/p	List of software (commercial software products)	Details of supporting documents
1.	MS Operating System Windows 7 Pro	License number 48381779
2.	MS Operating System Windows 10 Pro	CONTRACT No. UT-368 from 09.21.2021
3.	MS Office	License number: 43234783, 67810502, 67580703, 64399692, 62795141, 61350919
4.	Kaspersky Endpoint Security for Business – Standard Russian Edition. 50-99 Node 1 year Educational Renewal License	Agreement No. 7 AA dated 02/07/2025
5.	1C Accounting and 1C Salary	LICENSE AGREEMENT 612/L dated 02.02.2022 (additional licenses)
6.	PROF University	LICENSE AGREEMENT No. KrTsB-004537 dated 12/19/2023
7.	1C: PROF Library	LICENSE AGREEMENT No. 2281 dated 11.11.2020
8.	Consultant Plus	Contract No. 41AA dated 12/27/2024
9.	Contour.Tolk	Agreement No. K213753/24 dated 13.08.2024
10.	E-learning environment 3KL (Russian Moodle)	Agreement No. 1362.5 dated November 20, 2024
11.	Astra Linux Common Edition	Agreement No. 142 A dated September 21, 2021
12.	Information system "Plans"	Agreement No. 2873-24 dated June 28, 2024
13.	1C: Document Management	Agreement No. 2191 dated 10/15/2020
14.	R7-Office	Agreement No. 2 KS dated 12/18/2020
15.	License "OS ROSA CHROME workstation"	Agreement No. 88A dated 08/22/2024
16.	Alt Virtualization Server 10 (for secondary specialized and higher professional education)	Agreement No. 14AK dated 09/27/2024
17.	Dr.Web Desktop Security Suite Comprehensive protection + Control Center for 12 months.	Agreement No. 8 dated October 21, 2024
18.	Software "Schedule for educational institutions"	Agreement No. 82A dated July 30, 2024

List of freely distributed software

No. p/p	List of freely distributed software	Links to license agreement
1.	Yandex Browser	Freely distributed

		License agreement for the use of Yandex Browser programs https://yandex.ru/legal/browser_agreement/
2.	Yandex.Telemost	Freely distributed License Agreement for the Use of Programs https://yandex.ru/legal/telemost_mobile_agreement/
3.	Dr.Web CureIt!	Freely distributed License Agreement: https://st.drweb.com/static/new-www/files/license_CureIt_ru.pdf
4.	OpenOffice	Freely distributed License: http://www.gnu.org/copyleft/lesser.html
5.	LibreOffice	Freely distributed License: https://ru.libreoffice.org/about-us/license/
6.	VK Calls	Freely distributed https://vk.com/license
7.	Kaspersky Free Antivirus	Freely distributed https://products.s.kaspersky-labs.com/homeuser/Kaspersky4Win2021/21.16.6.467/english-0.207.0/3830343439337c44454c7c4e554c4c/kis_eula_en-in.txt

3.7. Resources of the information and telecommunications network "Internet"

Federal Electronic Medical Library

<http://www.femb.ru> (Clinical guidelines)

The Amur State Medical Academy library

<https://amurgma.ru/obuchenie/biblioteki/biblioteka-amurskoy-gma/>

The Electronic Library System "Student Consultant"

<https://www.studentlibrary.ru>

IV. ASSESSMENT TOOLS FUND

4.1 Current test control, final.

4.1.1. Examples of test tasks entrance control test tasks (with standard answers)

Tests in the Moodle system . Total number of tests - 100.

<https://educ-amursma.ru/local/crw/category.php?cid=36>

1. Active wound treatment methods include:

- 1) surgical method of wound treatment;
- 2) treatment of wounds with hydrogen peroxide;
- 3) vacuum treatment of wounds;
- 4) pulsed jet treatment;

2. The application of the Dieterichs splint begins:

- 1) from taking off shoes;
- 2) with mounting and strengthening the outer strip of the tire;
- 3) with mounting and strengthening the inner bar of the tire;
- 4) with the fixation of the "footrest";

3. In case of damage to the spleen, the patient's position is characteristic:

- 1) on your back with your legs tucked in;
- 2) restless position, "vanka-vstanka" symptom;
- 3) knee-elbow position;
- 4) position on the side.

4. Puncture of the pleural cavity in case of pneumothorax is performed :

- 1) in the 1st intercostal space;
- 2) in the 4th intercostal space;
- 3) in the 2nd intercostal space along the midclavicular line.
- 4) in the 7th intercostal space along the posterior axillary line.

Standard answers

1-1; 2-4; 3-3; 4--4.

4.1.2 Examples of test tasks for initial control (with standard answers).

1. The modern classification of thermal injuries includes:

- 1) 2 degrees of damage
- 2) 3 - and degrees.
- 3) 4 degrees
- 4) 5 degrees

2. Combined trauma with mechanical damage means:

- 1) fracture of the femur and tibia on one or both sides
- 2) fractures of bones and limbs, spine or pelvis with simultaneous damage to internal organs
- 3) fractures of the upper and lower limbs
- 4) damage to hollow and parenchymatous organs

3. The torpid phase of traumatic shock is not characterized by:

- 1) lowering blood pressure
- 2) increased breathing rate
- 3) increased heart rate
- 4) excitation

Answer standards: 1-3; 2-2; 3-4

4.1.3 Examples of test tasks for final control (with standard answers)

Tests in the Moodle system. Total number of tests - 100.

<https://educ-amursma.ru/local/crw/category.php?cid=36>

1. The erectile phase of traumatic shock is characterized by:

- 1) increased blood pressure
- 2) increased heart rate
- 3) excitement
- 4) increased breathing

2. An absolute symptom of fractures is:

- 1) pathological mobility
- 2) limb deformity
- 3) hematoma
- 4) dysfunction

3. "Glove juice" is formed when working with surgical gloves through:

- 5) 45 min
- 6) 40-60 min

- 7) 35 min
- 8) d. 1 h 30 min

Answer standards: 1-3; 2-1; 3-2.

4.1.4. Examples of test tasks for the final assessment (with standard answers)

Tests in the Moodle system. Total number of tests - 100.

<https://educ-amursma.ru/local/crw/category.php?cid=36>

1. Currently, the main method of sterilizing suture material is:

- 1) sterilization in ethyl alcohol
- 2) autoclaving
- 3) radiation sterilization in factory conditions
- 4) sterilization by boiling

2. Antiseptic suggested:

- 1) Zemmelsweiss
- 2) Lister
- 3) Bergman
- 4) Pasteur

3. General cleaning of the operating room is carried out:

- 1) at the end of the day
- 2) once a week
- 3) after each operation
- 4) before the start of the operation

Answer standards: 1-3; 2-2; 3-1.

4.2 Examples of situational tasks of current control

Task #1

A 17-year-old boy, while riding on a bus, extended his right hand out the window. A truck was coming towards him, and the side of the truck hit the extended hand. Traumatic amputation of the right upper limb occurred at the level of the middle third of the shoulder (the limb hangs by a flap of skin). Blood is gushing from the damaged artery.

How to stop bleeding?

The correct answer is : Apply a tourniquet to the upper third of the shoulder.

Problem №2. A 25-year-old patient came to see a surgeon, who is bothered by pain in 1 finger of the right hand. He has been ill for 3 days.

Upon examination, a swelling area of a cloudy white color with a diameter of up to 0.6 cm, surrounded by a thin belt of hyperemia, is determined on the palmar surface of the nail phalanx of the finger.

Diagnosis. How to help the patient?

The correct answer is : A cutaneous felon that needs to be opened.

Task #3

A man came to see a surgeon with a puncture wound on the plantar surface of his right foot. Two hours ago he stepped on a board with a nail. The clinic has documentary evidence that the patient received a full course of scheduled vaccinations according to his age. The wound on the foot was cleaned and an aseptic bandage was applied. How to carry out specific prophylaxis of tetanus?

Correct answer: Administer tetanus toxoid.

Task #4

A 42-year-old patient with a lacerated wound of the left thigh was admitted to the emergency department. 12 hours have passed since the injury. There is slight tissue edema in the area of the wound, the edges of the latter are uneven and cyanotic. What treatment tactics will you choose?

Correct answer.

It is necessary to perform primary surgical treatment of the wound.

Task number 5.

A 33-year-old patient with thermal burns to the back of his torso and buttocks was delivered to the hospital's emergency room by ambulance. According to those accompanying him, he sat down in a pot of boiling water that was standing on the floor.

The patient's condition is serious. In the accompanying sheet, the ambulance doctor noted that the burn surface was treated with Oxycyclozol aerosol and covered with an aseptic dressing. What was the ambulance doctor's mistake and what should have been done when providing first aid?

Correct answer.

It was necessary to administer painkillers and apply an aseptic dressing, rather than treat the burn wound with an aerosol.

Task #6

You are a doctor - an emergency pediatrician. You were called in the evening to a 17-year-old boy due to his deteriorating condition. Two days ago, the child was sent home from school complaining of a headache. At home, the local pediatrician examined him and prescribed anti-inflammatory and antibacterial drugs for an "acute respiratory viral infection".

On examination, the child's condition is severe, inhibited. Body temperature is 40 °C. The face is pale, acrocyanosis. Pulse is 120 beats per minute. Breathing is 28 per minute, shallow. The abdomen is soft, painless. The liver and spleen are not enlarged. There is pain upon palpation in the lower third of the right thigh, its swelling. What diagnosis should be considered? Your tactics.

Correct answer.

Acute hematogenous osteomyelitis should be suspected. It is necessary to administer a lytic mixture, immobilize the right lower limb and urgently hospitalize the patient in the surgical department.

4.3. List of practical skills that a student should have after mastering the discipline**Under the section "Desmurgy" know the dressings:**

1. Velpo bandage.
2. Bandage "Deso".
3. Bandage on the front of the neck.
4. Hippocrates cap.
5. "Turtle" bandage on the elbow joint.
6. "Turtle" bandage for the knee joint.
7. Headband "Cap".
8. Bandage on the back of the neck.
9. Eye patch.
10. Ear bandage.
11. "Occlusive" dressing "for open pneumothorax"
12. Bandage on the mammary gland.
13. Bandage on the first finger of the hand.
14. Spica bandage on the shoulder joint.
15. Cross-shaped bandage on the wrist.
16. Ankle bandage.

In the section "Blood transfusion" be able to:

1. Determine blood groups using tsoliklonami.

2. Conduct a compatibility test according to the ABO system and Rh factor.
3. Apply a tourniquet for arterial bleeding.
4. Determine the Rh factor using a universal reagent.
5. Know the places where you can apply finger pressure to arteries when they are damaged.
6. Collect a set of hemocorrectors for parenteral nutrition and treatment of hemorrhagic shock.

7. Fill the system for transfusion of hemocorrectors.

In the section "Traumatology" be able to:

1. Demonstrate reduction of the dislocation using the Kocher method.
2. Apply transport immobilization in case of hip fracture.
3. Perform immobilization for fractures of the bones of the leg, humerus, forearm, hand, foot.
4. Perform transport immobilization in case of dislocation of the shoulder.
5. Be able to diagnose the type of bone fracture using X-rays.

In the section "Anesthesiology":

1. Collect equipment and demonstrate blockade techniques according to Oberst Lukashevich.
2. Assemble a set of instruments for the anesthesiologist's table.
3. Show methods of artificial respiration.
4. Assemble a kit for tracheal intubation.
5. Show closed heart massage.

In the section "Asepsis" :

1. The surgeon puts on a sterile gown and gloves.
2. Dilute antibiotics in a bottle.
3. Collect the instruments for the operation – “primary surgical treatment of the wound”.
4. Show the technique of intravenous, intramuscular, and subcutaneous injections.
5. Assemble equipment for wound drainage according to Redon.
6. Divide surgical instruments into groups.
7. Collect preparations for the treatment of purulent wounds according to the phases of the wound process

4.4. Questions for exams in the discipline "General Surgery".

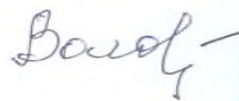
1. N. I. Pirogov, S. I. Spasokukotsky, S. S. Yudin, A. V. Vishnevsky their role in the development of domestic and world surgery
2. Deontology in surgery
3. Suture material, characteristics, sterilization methods.
4. Antisepsis. Definition. Types of antisepsis: mechanical, physical, chemical, biological.
5. Operating unit. Requirements for the operating unit.
6. Preparation and treatment of the surgical field. Modern antiseptic preparations for treatment of the surgical field.
7. Treatment of the surgeon's hands with Pervomur solution. Control of hand sterility.
8. Treatment of the surgeon's hands with a solution of iodopyrone, chlorhexidine bigluconate.
9. Sterilization of dressings, surgical linen. Sterility control. Methods of placing surgical linen and dressings in boxes
10. Surgical department. Basic sanitary and hygienic requirements for premises and equipment. Prevention of hospital-acquired infection.
11. Pre-sterilization treatment of instruments. Treatment of instruments contaminated with anaerobic infection.
12. Surgical instruments. Classification, sterilization and care.
13. Asepsis (definition, routes of infection transmission, control methods).
14. Sterilization of rubber products, cutting instruments, syringes, optical instruments.
15. Blood group. Characteristics of agglutinogens and agglutinins in the blood.

16. Indications and contraindications for blood transfusion
17. Protein, hemodynamic hemocorrectors.
18. Mechanical methods of final stopping of bleeding
19. Blood preparation . Indications for use
20. Plasma, its types. Indications for use.
21. Hemorrhagic shock. Classification, clinical features, treatment.
22. Acute posthemorrhagic anemia. Factors of blood loss compensation. Methods for determining the volume of blood loss.
23. Errors in determining blood groups
24. Bleeding, definition, classification.
25. Hemolytic shock (etiology, stages, clinical picture, treatment).
26. Blood preservation, terms and conditions of blood storage.
27. Methods for temporary stopping of bleeding.
28. Biological method of final stopping of bleeding.
29. Methods and techniques of blood transfusion.
30. History of hemotransfusiology. Periods in the history of blood transfusion.
31. Rhesus factor, methods of determination, significance in the clinic.
32. Organization of blood and donation services in Russia. Examination of donors.
33. Tests performed before and during blood transfusion.
34. Exchange blood transfusion, reinfusion, autohemotransfusion.
35. Mechanical complications during blood transfusion.
36. Reactive complications during blood transfusion.
37. Fistulas, definition, classification, diagnostics, clinical presentation, treatment.
38. Local and general manifestations of purulent diseases of soft tissues.
39. Abscess, phlegmon. Definition, clinical features, diagnostics, treatment.
40. Panaritium (superficial and deep forms). Definition, classification, clinical features, diagnostics, treatment.
41. Hidradenitis, lymphangitis, lymphadenitis. Clinic, diagnostics, treatment.
42. Erysipelas, classification, clinical features, diagnostics, treatment.
43. Wounds, classification, phases of the wound healing process, types of wound healing.
44. Primary surgical treatment of wounds.
45. Surgical sepsis, definition, clinical features, diagnostics, basic principles of local and general treatment.
46. Phlegmon of the hand, classification, clinical picture, diagnostics, treatment.
47. Mastitis, definition, classification, clinical presentation, conservative and surgical treatment.
48. Tetanus, clinical presentation, diagnostics, treatment, prevention (specific and non-specific).
49. Furuncle, carbuncle, definition, clinic, diagnosis, treatment.
50. Anaerobic gas gangrene, definition, clinical features, diagnostics, treatment.
51. Non-clostridial anaerobic infection, diagnosis, clinical features, treatment.
52. Acute hematogenous osteomyelitis, definition, clinical features, diagnostics, treatment.
53. Trophic ulcers, definition, clinical features, diagnostics, treatment.
54. Purulent wound, phases of the wound process, clinical picture, treatment.
55. Trauma, classification of injuries. Concept of traumatism, classification, ways to reduce traumatism.
56. Traumatic shock, definition, phases of shock, clinical features, treatment.
57. Syndrome of prolonged compression (traumatic toxicosis). Definition, diagnostics, clinical picture, treatment, first aid.
58. Burns, classification, determination of area, depth of damage, first aid for burns. Methods of local treatment of burns. Types of skin grafting.
59. Burn disease, periods, clinical features, treatment.
60. First aid for thermal injuries.

61. Closed injuries of the abdominal cavity. Damage to parenchymatous and hollow organs (clinical presentation, diagnostics, treatment).
62. Dislocations. Definition, clinical features, diagnostics, treatment.
63. Fractures of tubular bones. Definition, classification, clinical picture, diagnostics, first aid, treatment methods.
64. Frostbite, definition, periods, clinical features, diagnostics, first aid, principles of treatment.
65. Chest injury (pneumothorax, hemothorax). Classification, diagnosis, first aid, treatment.
66. Surgical methods of treatment of fractures of tubular bones.
67. Differential diagnostics of benign and malignant tumors.
68. Malignant tumors, classification, general principles of diagnosis and treatment.
69. Surgical operation, definition, classification, stages of the operation.
70. Preoperative period. Definition, basic principles of preparing a patient for surgery. Preoperative conclusion
71. Postoperative period, characteristics of its stages. Complications in the early postoperative period.
72. Outpatient care for surgical patients. Documentation in the clinic, medical examination of surgical patients.
73. Dry, wet gangrene of the lower extremities. Causes, clinical picture, treatment.
74. Anesthesia, definition, classification of general anesthesia
75. Anesthetic care, definition, its components.
76. Premedication, definition, indications, components.
77. Spinal anesthesia, indications, contraindications, technique of implementation.
78. Complications of spinal anesthesia.
79. Local anesthesia. Indications and contraindications for local anesthesia. Drugs for local anesthesia.
80. Conduction anesthesia. Modern drugs for conduction anesthesia.
81. Intravenous anesthesia, types, methods, indications, contraindications.
82. Muscle relaxants. Their role in modern pain relief.
83. Endotracheal anesthesia. Indications, contraindications, complications. Anesthesia apparatus, its structure (contours)
84. Epidural anesthesia, indications, contraindications, complications.
85. Clinical death. Diagnostics, resuscitation measures.
86. New antiseptics and multicomponent ointments.
87. Acute thrombophlebitis of superficial veins. Clinical presentation, treatment methods, complications.
88. Acute thrombophlebitis of deep veins of lower extremities. Clinic, treatment, complications.
89. Clinic, diagnostics and methods of treatment of chronic arterial insufficiency.
90. Clinical presentation, diagnostics and treatment methods of acute arterial insufficiency.
91. Nutrition of surgical patients (enteral, tube, parenteral).
92. General principles of organ and tissue transplantation.

APPROVED

at a department meeting
of the Department of Surgery with a
course on urology
Protocol No. 8 dated May 14, 2026



N.P. Volodchenko
Head of Department

**ADDITIONS AND CHANGES TO THE WORK PROGRAM
IN THE DISCIPLINE «GENERAL SURGERY»
SPECIALTY 31.05.01 MEDICAL CARE
FOR THE 2026-2027 ACADEMIC YEAR**

Make an addition and change to the table in section 3.5. «Professional databases, information and reference systems, electronic educational resources» to read as follows:

Name resource	Resource Description	Access	Resource address
Electronic library systems			
"Student Consultant" Electronic library medical university.	For students and faculty of medical and pharmaceutical universities. Provides access to electronic versions of textbooks, teaching aids, and periodicals.	Remote access after registration under the university profile	https://www.studentlibrary.ru/
Reference and information system "MedBaseGeotar".	The MedBaseGeotar reference and information system is designed for practicing medical specialists, researchers, teachers, postgraduate students, residents, senior students, and healthcare managers to quickly search, select, and read the medical literature they need for their work in a single data source.	Remote access after registration under the university profile	https://mbasegeotar.ru/pages/index.html
Electronic Library System "Bookup"	A large medical library is an information and educational platform for the shared use of electronic educational and methodological publications from medical universities in Russia and the CIS countries.	Remote access after registration under the university profile	https://www.books-up.ru/
Electronic Block System "Lan"	The Network Electronic Library of Medical Universities is an electronic database of educational and scientific works on medical topics, created for the purpose of implementing network forms of	Remote access after registration under the university	https://e.lanbook.com/

	professional educational programs, open access to educational materials for partner universities.	profile	
Scientific electronic library "CyberLeninka "	CyberLeninka is a scientific electronic library built on the paradigm of open science (Open Science), whose main goals are the popularization of science and scientific activity, public oversight of the quality of scientific publications, the development of interdisciplinary research, a modern institution of scientific review, increasing the citation rate of Russian science, and building a knowledge infrastructure. It contains over 2.3 million scientific articles.	free access	https://cyberleninka.ru/
Human Biology Knowledge Base	Reference information on physiology , cell biology , genetics , biochemistry , immunology , pathology . (Resource of the Institute of Molecular Genetics of the Russian Academy of Sciences .)	free access	http://humbio.ru/
State register of medicines	The State Register of Medicines website contains information about medications: indications, contraindications, mechanism of action, side effects, dosages, and methods of administration.	free access	https://grls.rosminzdrav.ru/GRLS.aspx
Information systems			
Clinical Guidelines Index	A resource of the Russian Ministry of Health that contains clinical guidelines developed and approved by medical professional non-profit organizations of the Russian Federation, as well as methodological manuals, nomenclatures, and other reference materials.	Link to download the application	https://cr.minzdrav.gov.ru/#/
Federal Electronic Medical Library (FEMB)	The Federal Electronic Medical Library is part of the unified state information system in the field of healthcare as a reference system. The FEMB was created based on the collections of the I.M. Sechenov Central Scientific Medical Library.	free access	https://femb.ru/
Russian State Library (RSL)	Collection size: approximately 3 million titles. Coverage period: From the 11th century to the present day. The Russian State Library's Digital Library is a collection of electronic copies of valuable and frequently requested publications from the Russian State Library's collections, external sources, and documents originally created in electronic form.	Registration on the website	https://www.rsl.ru/
Russian Medical Association	A professional online resource. Purpose: to promote effective professional activity among medical personnel. Contains the	free access	http://www.rmass.ru/

	charter, personnel, structure, membership rules, and information about the Russian Medical Union.		
Web medicine	The website provides a directory of professional medical resources, including links to the most authoritative specialized websites, journals, societies, as well as useful documents and programs. It is intended for physicians, students, and staff of medical universities and research institutions.	free access	http://webmed.irkutsk.ru/
Databases			
Worldwide healthcare organization	The site contains news, statistics on countries that are members of the World Health Organization, fact sheets, reports, WHO publications, and much more.	library, free access	http://www.who.int/ru/
Ministry of Science and higher Education of the Russian Federation	The website of the Ministry of Science and Higher Education of the Russian Federation contains news, newsletters, reports, publications, and much more.	free access	http://www.minobrnauki.gov.ru
Ministry of Education of the Russian Federation.	The website of the Ministry of Education of the Russian Federation contains news, newsletters, reports, publications, and much more.	free access	https://edu.gov.ru/
Polpred.com	Electronic Library System Business Media. Media Review	free access	https://polpred.com/news
Bibliographic databases			
BD Russian Medicine	Created at the Central Scientific and Methodological Library, it covers the entire collection since 1988. The database contains bibliographic descriptions of articles from Russian journals and collections, dissertations and their abstracts, as well as Russian and foreign books, institute proceedings, conference materials, etc. Thematically, the database covers all areas of medicine and related fields of biology, biophysics, biochemistry, psychology, etc.	free access	https://rucml.ru/
PubMed	A text database of medical and biological publications in English. PubMed is an electronic search engine with free access to 30 million publications from 4,800 indexed medical journals. The database contains articles published from 1960 to the present, including information from MEDLINE, PreMEDLINE, and NLM. Each year, the portal is updated with more than 500,000 new papers.	free access	https://pubmed.ncbi.nlm.nih.gov/
eLIBRARY.RU	A Russian information portal in science,	Full	http://elibrary.ru/defaultx.as

	technology, medicine, and education, containing abstracts and full texts of over 13 million scientific articles and publications. The eLIBRARY.RU platform offers electronic versions of over 2,000 Russian scientific and technical journals, including over 1,000 open-access journals.	functionality of the site is available after registration.	p
Electronic library of dissertations (RSL)	Currently, the Electronic Library of Dissertations of the Russian State Library contains more than 919,000 full texts of dissertations and abstracts.	free access	http://diss.rsl.ru/?menu=disscatalog/
Medline.ru	Medical and biological portal for specialists. Biomedical journal.	free access	https://journal.scbmt.ru/jour/index
Official Internet portal of legal information	The single official state information and legal resource in Russia	free access	http://pravo.gov.ru/

6. Add and amend the table in section 3.6. «Licensed and freely distributed software used in the educational process» to read as follows:

List of software (commercial software products)

№ p/p	List of software (commercial software products)	Details of supporting documents
1.	MS operating system Windows 7 Pro	License number 48381779
2.	MS operating system Windows 10 Pro	CONTRACT No. UT-368 from September 21, 2021
3.	MS Office	License numbers: 43234783, 67810502, 67580703, 64399692, 62795141, 61350919
4.	Kaspersky Endpoint Security for Business – Standard Russian Edition. 50-99 Node 1-year Educational Renewal License	Agreement No. 7 AA dated 02/07/2025
5.	1C Accounting and 1C Salary	LICENSE AGREEMENT 612/L dated 02.02.2022 (additional licenses)
6.	1C: PROF University	LICENSE AGREEMENT No. KrTsB-004537 dated December 19, 2023
7.	1C: PROF Library	LICENSE AGREEMENT No. 2281 dated November 11, 2020
8.	Consultant Plus	Contract No. 41AA dated December 27, 2024
9.	Kontur.Tolk	Agreement No. K213753/24 dated August 13, 2024
10.	3KL e-learning environment (Russian Moodle)	Agreement No. 1362.5 dated November 20, 2024
11.	Astra Linux Common Edition	Agreement No. 142 A dated September 21, 2021
12.	Information system "Plans"	Agreement No. 2873-24 dated June 28, 2024
13.	1C: Document Management	Agreement No. 2191 dated 10/15/2020

14.	R7-Office	Agreement No. 2 KS dated 12/18/2020
15.	License for the "ROSA CHROME OS Workstation"	Agreement No. 88A dated 08/22/2024
16.	Alt Virtualization Server 10 (for secondary and higher vocational education)	Agreement No. 14AK dated September 27, 2024
17.	Dr.Web Desktop Security Suite Comprehensive Protection + Control Center for 12 months.	Agreement No. 8 dated October 21, 2024
18.	Software "Schedule for educational institutions"	Agreement No. 82A dated July 30, 2024

List of freely distributed software

№ p/p	Scroll freely distributed software	Links to the license agreement
1.	Yandex Browser	Freely distributed License Agreement for the use of Yandex Browser programs https://yandex.ru/legal/browser_agreement/
2.	Yandex.Telemost	Freely distributed License Agreement for the use of programs https://yandex.ru/legal/telemost_mobile_agreement/
3.	Dr.Web CureIt !	Freely distributed License Agreement: https://st.drweb.com/static/new-www/files/license_CureIt_ru.pdf
4.	OpenOffice	Freely distributed License: http://www.gnu.org/copyleft/lesser.html
5.	LibreOffice	Freely distributed License: https://ru.libreoffice.org/about-us/license/
6.	VK Calls	Freely distributed https://vk.com/licence
7.	Kaspersky Free Antivirus	Freely distributed https://products.s.kaspersky-labs.com/homeuser/Kaspersky4Win2021/21.16.6.467/english-0.207.0/3830343439337c44454c7c4e554c4c/kis_eula_en-in.txt