

Federal State Autonomous Educational Institution of Higher Education
«Peoples' Friendship University of Russia»

Medical Institute

Recommended MCSD

SYLLABUS
(STUDY GUIDE)

Subject

General Surgery

Recommended for the direction of training (specialty)

31.05.01 General Medicine

Program (profile, specialization)

General Medicine

1. Aims and objectives of the discipline

The main aim of the general surgery course is to master skills in clinical examination of surgical patients, to get knowledge of surgical treatment principles and semiotics of basic surgical diseases.

Objectives of the general surgery course: To get knowledge of diagnostics and treatment principles in surgery. To prepare the basis for studying all the following surgical disciplines as surgical diseases, cardiovascular surgery, urology, oncology, obstetrics and gynecology, etc. To study such subjects as asepsis and antisepsis, modern diagnostic methods in surgery (endoscopy, ultrasound, computed tomography), bleeding signs and methods of its control, rules of blood groups determining, transfusion of blood and blood substitutes, types of anesthesia and resuscitation, main stages of surgical procedures and principles of patient care in the pre- and postoperative periods. To study basic diseases and conditions which are most common in surgery. To study diagnostics and treatment of various wounds, injuries and fractures, necrosis and trophic ulcers, burns and frostbites, majority of surgical purulent diseases. To be acquainted with the basic principles in oncology, transplantology and plastic surgery.

2. Discipline place in the Main Educational Program structure

Discipline refers to the basic part of disciplines on the specialty **31.05.01 “GENERAL MEDICINE”**.

Table 1 shows the preceding and following disciplines aimed to form the discipline competencies in accordance with the competencies matrix of the Educational Program of Higher Education.

Table 1

The preceding and following disciplines aimed to form competencies

№	Code and competence name	Preceding disciplines	Following disciplines (groups of disciplines)
General Professional Competence			
1	GPC -1,4,5,6,7,10	Philosophy	Neurology, neurosurgery
2	GPC -1,4,5,6,7,10	Radiology and radiotherapy	Anesthesiology, resuscitation and intensive care medicine
3	GPC -1,4,5,6,7,10	Propaedeutics of internal diseases	Hospital therapy, endocrinology
4	GPC -1,4,5,6,7,10	Pathophysiology	Hospital surgery, pediatric surgery, emergency medicine
5	GPC -1,4,5,6,7,10	Anatomic pathology	Obstetrics and gynecology
6	GPC -1,4,5,6,7,10	Human Anatomy.	Oncology, radiotherapy, traumatology, orthopedics
7	GPC -1,4,5,6,7,10	Histology, cytology and embryology	Faculty therapy, faculty surgery, urology
Professional Competence			
1	PC -1,2,3,6 (6.3)	Philosophy	Neurology, neurosurgery
2	PC -1,2,3,6 (6.3)	Radiology and radiotherapy	Anesthesiology, resuscitation and intensive care medicine
3	PC -1,2,3,6 (6.3)	Propaedeutics of internal diseases	Hospital therapy, endocrinology
4	PC -1,2,3,6 (6.3)	Pathophysiology	Hospital surgery, pediatric surgery, emergency medicine
5	PC -1,2,3,6 (6.3)	Anatomic pathology	Obstetrics and gynecology
6	PC -1,2,3,6 (6.3)	Human Anatomy	Oncology, radiotherapy, traumatology, orthopedics
7	PC -1,2,3,6 (6.3)	Histology, cytology and embryology	Faculty therapy, faculty surgery, urology

3. Requirements for the results of discipline mastering

Discipline studying is directed to form the following competencies:

GPC -1,4,5,6,7,10 PC -1,2,3,6 (6.3)

Competence Code	Competence Name	Competence Achievement Indicator Code and Name
GPC-1	Being able to implement moral and legal norms, ethical and deontological principals in professional activity	GPC-1.1. Being able to abide by the ethical standards and legal regulations in professional activity. GPC-1.2. Being able to present professional information in the process of intercultural interaction observing the principles of ethics and deontology.
GPC-4	Being able to use medical devices provided for by the procedure for medical care, and conduct patient examinations in order to determine a diagnosis	GPC-4.1. Being able to use medical devices in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care, care taking into account the medical care standards. GPC-4.2. Being able to assess the effectiveness and safety of medical devices. GPC-4.3. Mastering the technique of performing typical medical procedures using medical devices provided for by the procedures for medical care provision.
GPC-5	Being able to assess morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks	GPC-5.1. Mastering the algorithm of clinical, laboratory and functional diagnosis when dealing with professional tasks. GPC-5.2. Being able to evaluate the results of clinical, laboratory and functional diagnosis when dealing with professional tasks. GPC-5.3. Being able to determine morpho-functional, physiological states and pathological processes of the human body.
GPC-6	Being able to organize patient care, provide primary health care, arrange work and make professional decisions in emergency conditions at the prehospital stage, in emergency situations, epidemics and in foci of mass destruction	GPC-6.1. Mastering the algorithm for providing first aid in emergency conditions, including in extreme conditions and foci of mass destruction. GPC-6.2. Being able to identify the conditions which require emergency medical care, including clinical signs of sudden cessation of blood circulation and respiration. GPC-6.3. Being able to provide emergency medical care to patients in conditions that pose a threat to the life of a patient, including clinical death (cessation of the vital bodily functions (blood circulation and (or) breathing)).
GPC-7	Being able to prescribe treatment and monitor its efficacy and safety безопасности	GPC-7.1. Mastering skills in the methods of general clinical examination, interpretation of laboratory results, instrumental diagnostic methods. GPC-7.2. Being aware of the algorithm for making a preliminary diagnosis with the subsequent referral of the patient to the relevant medical specialist.
GPC-10	Being able to understand	GPC-10.1. Being able to use information technology

	the operation principles of modern IT and use them to solve professional tasks	in professional activity. GPC-10.2 Being able to observe the information security rules in professional activity. GPC10.3. Being able to use information and communication technologies, including applied software for general and special purposes in dealing with professional tasks.
PC-1	Being able to provide emergency or urgent medical care to a patient	PC1.1. Being able to assess the condition of a patient who needs emergency or urgent medical care. PC-1.2. Being able to recognize conditions that arise from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and which require emergency medical care. PC-1.3. Being able to provide emergency medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life. PC-1.4. Being able to recognize conditions which pose a threat to the patient's life, including conditions of clinical death (cessation of the vital bodily functions (blood circulation and/or respiration) which require emergency medical care. PC-1.5. Being able to provide emergency medical care to patients in conditions which pose a threat to the patient's life, including clinical death (cessation of the vital bodily functions (blood circulation and/or respiration). PC-1.6. Being able to use drugs and medical devices when providing medical care in emergency or urgent forms.
PC-2	Being able to examine a patient in order to determine a diagnosis	PC-2.1. Mastering the skills to collect complaints, anamnesis of the patient's life and disease, as well as conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation). PC-2.2. Being able to make a preliminary diagnosis and make up a plan of laboratory and instrumental examinations of a patient. PC-2.3. Being able to refer a patient to a laboratory examination in case there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the medical care standards. PC-2.4. Being able to refer a patient to an instrumental examination in case there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care.

		<p>PC-2.5. Being able to refer a patient to consult with a medical specialist if there is a medical indication in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care.</p> <p>PC-2.6. Being able to refer a patient to be provided with specialized medical care in an inpatient setting or in a day hospital in case there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care.</p> <p>PC-2.7. Being able to carry out differential diagnosis with other diseases/conditions, including the urgent ones, as well as to make a diagnosis taking into account the current international statistical classification of diseases and problems related to health (ICD).</p>
PC-3	Способен к назначению лечения и контроль его эффективности и безопасности	<p>PC-3.1. Being able to develop a treatment plan for a disease or condition taking into account the diagnosis, age and clinical picture in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care.</p> <p>PC-3.2. Being able to prescribe medicinal drugs, medical devices and medical nutrition taking into account the diagnosis, age and clinical picture of the disease and in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care.</p> <p>PC-3.3. Being able to prescribe 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 guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care.</p> <p>PC-3.4. Being able to assess the efficacy and safety of the use of drugs, medical devices, medical nutrition and other treatment methods.</p> <p>PC-3.5. Being able to provide palliative care in collaboration with medical specialists and other healthcare professionals.</p> <p>PC-3.6. Being able to organize personalized treatment for a patient, including pregnant women, elderly and senile patients; assess the efficacy and safety of treatment.</p>

PC-6	Being able to keep medical records and organize the activities of the nursing staff	PC-6.3. Being able to keep medical records, including in the electronic form.
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At the end of discipline studying, the student has to:

Know:

- What is asepsis?
- Routes of pathogens entering the body.
- General principles of infection prevention.
- Methods of gloves sterilization.
- Methods of surgical tools sterilization.
- Autoclaving principle. Construction of an autoclave.
- Steam sterilization and steam sterilization under pressure.
- Sterilization of dressings.
- Rules of packing surgical dressings into a metal drum (box) for sterilization.
- Quality control in sterilization.
- Prevention methods of air-borne, droplet and contact infection.
- Prevention methods of implant infection.
- What is antiseptics?
- What differs antiseptics from asepsis?
- What is common between antiseptics and asepsis?
- Types of antiseptics.
- Methods of mechanical antiseptics.
- Physical antiseptics, types.
- Requirements for chemical antiseptics.
- Action mechanism of antiseptics.
- Methods of antiseptic application.
- Methods and rules of wound drainage procedure.
- What is bleeding and blood loss?
- Bleeding classification.
- Bleeding signs and clinical presentation of blood loss.
- Types of bleeding control and their principles.
- Methods of temporary and final bleeding control.
- Physical methods of bleeding arrest.
- Chemical and biological methods of bleeding control.
- Different methods of final bleeding control.
- The concept of blood group systems (ABO and Rhesus (Rh) group systems).
- Conditions that must be kept for blood typing (ABO and Rhesus blood groups).
- Methods of determining the ABO and Rhesus blood systems.
- Conditions for blood and plasma derivatives' storage.
- Signs of unsuitable blood for transfusion.
- How can be blood and plasma derivatives transfused?
- How to conduct testing for individual and biological compatibility between donor and recipient blood?
- What is blood transfusion?
- How can be blood transfused in a human?
- What mistakes can be made during blood transfusion?

- What should precede blood transfusion?
- What complications can develop in blood transfusion?
- How to prevent complications in blood transfusion?
- How does a surgery (surgical procedure) influence on the patient's body?
- What does preoperative period mean?
- Meaning of preoperative period in preventing complications connected with a surgery.
- What is the essence of preparing a patient for a surgery?
- What tests make it possible to determine the state of pulmonary, cardiovascular systems, liver and kidney function?
- How to assess the degree of surgical (operative) risk?
- What does postoperative period mean? Phases of postoperative period.
- What is the postoperative patient's state?
- Basic groups of postoperative complications and development causes.
- Features of postoperative period depending on surgery type.
- Complications in early postoperative period.
- Patient care with different types of postoperative period courses.
- Meaning of patient early ambulation (activity) following surgery to prevent postoperative complication development.
- What does a surgery (surgical procedure) mean?
- Types of surgeries.
- Stages of a surgery.
- Structure of an operation block.
- Asepsis in an operation block.
- Basic clinical signs of a wound.
- What is a penetrating wound? What is its danger?
- Treatment principles of aseptic wound.
- Tasks and technique of primary surgical debridement of the wound. Indications to primary surgical debridement of the wound.
- Suturing types in primary surgical debridement of the wound.
- Treatment principles of purulent wound.
- Burn and frostbite degrees.
- Burn danger for a patient.
- Treatment of a patient with burns and frostbites.
- What does burn disease mean? Stages of burn disease.
- Causes of tissue necrosis development.
- Types of tissue necrosis.
- Distinctive features of dry and wet gangrene.
- General principles for treatment of patients with tissue necrosis.
- Treatment of patients with dry and wet gangrene.
- Treatment of patients with trophic ulcers on low extremities.
- Fistula classification, diagnostics.
- Treatment of patients with fistulas.
- What does a plastic surgical procedure mean?
- Types of skin grafting.
- What conditions should be followed in performing plastic surgical procedures?
- What is a free and non-free skin grafting?
- Stages of the skin grafting by Filatov.
- Tendon and nerve repair technique.
- What does true tumor mean?
- Differences between benign and malignant tumors.
- What does precancerous disease (condition) mean?

- What are oncologic “alarm” signs?
- What symptoms make it possible to suspect a malignant tumor in a patient?
- Special diagnostic methods for detection of a tumor.
- The concept of cancer staging.
- The Russian and international classification principle in malignant tumors.
- Technique for needle biopsy of a tumor.
- Types of cancer treatment.
- Classification of special diagnostic methods.
- Diagnostic capabilities of each special method in the investigation.
- Basic methods of X-ray imaging.
- Features of modern endoscopic equipment.
- Value of biopsy for diseases’ diagnostics.
- Ultrasound in the surgical clinic.
- Principles of radioisotope diagnostics.
- Possible changes in the patient’s body in case of trauma and disease.
- Diagnostic methods that make it possible to reveal pathological process.
- Diagnostic methods that help to clarify the nature of the disease.
- What is furuncle? Main sites for furuncle localization.
- What is carbuncle? Features of carbuncle treatment.
- What is hydradenitis?
- Definition of abscess and phlegmon.
- Features of clinical presentation in erysipelas.
- Principles of treatment in acute purulent inflammation of soft tissues.
- Surgery types in acute purulent infection of soft tissues.
- Use of different types of antiseptics in purulent infection treatment.
- What is lymphadenitis? Features of its treatment.
- What is thrombophlebitis? Features of its treatment.
- Etiology features of acute lymphadenitis and thrombophlebitis.
- Main clinical signs of lymphangitis and thrombophlebitis.
- Differential diagnosis principles of acute lymphangitis and thrombophlebitis.
- How to prevent development of acute mastitis and parotitis?
- Mastitis classification.
- The feature of surgical treatment in purulent mastitis and parotitis.
- Classification of paraproctitis.
- Clinical presentation in different forms of paraproctitis.
- Methods of treatment in acute paraproctitis.
- Causes of peritonitis development.
- Basic clinical signs of peritonitis.
- Treatment options for patients with peritonitis.
- Clinical presentation and diagnostics of acute pleuritis.
- Methods of treatment in purulent pleuritis.
- Ways of infection spreading into a bone.
- Clinical presentation of osteomyelitis.
- Diagnostic methods for detection of osteomyelitis.
- Treatment methods for patients with osteomyelitis.
- Basic clinical signs of panaritium depending on its form.
- X-ray radiological signs of bony panaritium.
- What determines the choice of treatment method in panaritium? Indications to surgical treatment in panaritium.

- Types of incisions in surgical treatment of paronychia.
- Clinical signs of anaerobic infection (gas gangrene and tetanus).
- Methods of specific and nonspecific prophylaxis in anaerobic infection.
- Different types of purulent wound drainage.
- Advantages of active antibacterial drainage of a purulent wound.
- Indications to suturing of contaminated wound.
- Treatment of purulent wounds in anaerobic environment.
- Types of suturing in contaminated wound closure.
- Main clinical symptoms of soft tissue injuries (contusions, sprains, strains).
- Management of patients with soft tissue injuries (contusions, sprains, strains).
- Features of first aid in crush injuries (crush syndrome).
- Classifications of fractures and dislocations.
- Value of physical examination in fracture diagnostics.
- Value of X-ray in fracture diagnostics.
- General principles of treatment in fractures and dislocations.
- What is reduction (reposition)? Types of reduction.
- Methods of bone immobilization in fractures.
- What is bandage? What are bandages used for?
- Types of bandages.
- Bandaging techniques.
- Technique of plaster splinting.
- Features of clinical presentation in closed head injury.
- Types of craniocerebral injury.
- General principles of treatment in patients with craniocerebral injury.
- Technique for central venous pressure measurement.
- Dangers in closed abdominal injuries.
- Diagnostics in abdominal injuries.
- Management of patients with abdominal injuries.
- Value of laparoscopy in blunt abdominal trauma.
- Basic symptoms in chest injuries.
- Dangers in closed chest injuries.
- Subcutaneous emphysema pathogenesis in blunt chest trauma.
- Pneumothorax types. Diagnostics in pneumothorax.
- Management of patients with pneumothorax.
- Clinical presentation in hemothorax. Treatment of patients with hemothorax.
- Technique of pleural puncture procedure (thoracentesis).
- Indications to surgical treatment in blunt chest trauma.
- Pleural drainage technique.

Have abilities:

- To sterilize surgical tools by autoclaving.
- To pack surgical dressings into a metal drum (box) for sterilization.
- To control sterilization quality.
- To sterilize optic devices.
- To scrub hands and arms before a surgical procedure.
- To put on sterile mask, gown and gloves.
- To perform surgical skin preparation.
- To use antiseptics in different forms (powder, ointment, solution).
- To perform debridement of a purulent wound.

- To use knowledge on asepsis working at a dressing room.
- To apply finger pressure to appropriate pressure points for temporary control of bleeding.
- To apply tourniquet to stop bleeding.
- To arrest bleeding with maximum flexion of a limb.
- To control bleeding using forceps.
- To prepare everything you need for blood typing (ABO and Rhesus blood groups).
- To determine blood group.
- To conduct Rh factor test.
- To determine suitability of blood for transfusion.
- To gather the necessary equipment for blood transfusion.
- To determine the individual compatibility between donor and recipient blood.
- To perform pre- and postoperative assessment of the patient's organ and system functions.
- To determine the state of a postoperative wound.
- To reveal postoperative complications: bleeding, peritonitis.
- To provide first aid for the injured person with a wound. To use an individual dressing package.
- To determine a wound type.
- To choose treatment method in various wounds.
- To use antiseptics in treatment of a purulent wound.
- To determine burn and frostbite degree.
- To estimate the burned surface area.
- To provide first aid for the injured person with burns and frostbites.
- To determine the type of tissue necrosis.
- To differentiate dry gangrene from wet gangrene.
- To identify superficial tumors and recognize signs of benign and malignant tumors.
- To prepare instruments for fine needle biopsy of tissues.
- To make a plan for a patient investigation to identify tumor process.
- To choose diagnostic method to identify pathological process.
- To prepare a patient for investigation by a special method.
- To collect patient's complaints and analyze them.
- To reveal basic signs of surgical diseases and organ and tissue injuries (local tenderness, symptom of peritoneum irritation, fluctuation, free fluid and gas in cavities and so on).
- To recognize different types of closed injuries.
- To identify acute inflammatory process in soft tissues.
- To detect tissue infiltrate.
- To identify the phase of inflammatory process and determine its spreading degree according to clinical presentation.
- To differ furuncle from carbuncle.
- To determine the fluctuation symptom.
- To detect abscess of soft tissues.
- To diagnose acute lymphadenitis and lymphangitis.
- To diagnose acute thrombophlebitis.
- To determine primary focus in acute lymphadenitis and thrombophlebitis.
- To reveal signs of lymph node suppuration.
- To determine a complex of management measures for patients with acute lymphadenitis and thrombophlebitis.
- To perform breast examination.
- To diagnose acute inflammatory process in breast and determine its phase.
- To diagnose acute parotitis.

- To identify symptoms of peritonitis.
- To determine the cause of peritonitis development.
- To identify pleural effusion by percussion and X-ray radiography.
- To recognize osteomyelitis features on X-ray images.
- To identify the source of bone infection.
- To diagnose different forms of paronychia.
- To determine indications to surgical treatment of paronychia.
- To conduct specific tetanus prophylaxis.
- To conduct specific gas gangrene prophylaxis.
- To put the gauze drainage into a purulent wound correctly.
- To prepare a system for active drainage of a purulent wound.
- To diagnose soft tissue injuries (contusions, sprains, strains).
- To provide first aid for persons with soft tissue injuries.
- To diagnose fracture and dislocation.
- To provide first aid for the injured person with fracture and dislocation.
- To apply the simplest plaster cast.
- To apply the simplest roller bandages to a head, lower and upper limbs.
- To prepare and apply plaster splint.
- To recognize clinical presentation of craniocerebral injury.
- To provide first aid for the injured person with craniocerebral trauma.
- To prepare a set for central venous pressure measurement.
- To reveal intra-abdominal bleeding and hollow organ rupture.
- To read an abdominal X-ray image.
- To provide first aid for the injured person with blunt abdominal trauma.
- To identify hemothorax and pneumothorax.
- To prepare a set for pleural puncture procedure (thoracentesis).
- To recognize signs of continuous intrapleural bleeding.

To have skills

- To sterilize surgical tools by autoclaving.
- To pack surgical dressings into a metal drum (box) for sterilization.
- To control sterilization quality.
- To sterilize optic devices.
- To scrub hands and arms before a surgical procedure.
- To put on sterile mask, gown and gloves.
- To perform surgical skin preparation.
- To use antiseptics in different forms (powder, ointment, solution).
- To perform debridement of a purulent wound.
- To use knowledge on asepsis working at a dressing room.
- To apply finger pressure to appropriate pressure points for temporary control of bleeding.
- To apply tourniquet to stop bleeding.
- To arrest bleeding with maximum flexion of a limb.
- To control bleeding using forceps.
- To prepare everything you need for blood typing (ABO and Rhesus blood groups).
- To determine blood group.
- To conduct Rh factor test.
- To determine suitability of blood for transfusion.
- To gather the necessary equipment for blood transfusion.
- To determine the individual compatibility between donor and recipient blood.

- To perform pre- and postoperative assessment of the patient's organ and system functions.
- To determine the state of a postoperative wound.
- To reveal postoperative complications: bleeding, peritonitis.
- To provide first aid for the injured person with a wound. To use an individual dressing package.
- To determine a wound type.
- To choose treatment method in various wounds.
- To use antiseptics in treatment of a purulent wound.
- To determine burn and frostbite degree.
- To estimate the burned surface area.
- To provide first aid for the injured person with burns and frostbites.
- To determine the type of tissue necrosis.
- To differentiate dry gangrene from wet gangrene.
- To identify superficial tumors and recognize signs of benign and malignant tumors.
- To prepare instruments for fine needle biopsy of tissues.
- To make a plan for a patient investigation to identify tumor process.
- To choose diagnostic method to identify pathological process.
- To prepare a patient for investigation by a special method.
- To collect patient's complaints and analyze them.
- To reveal basic signs of surgical diseases and organ and tissue injuries (local tenderness, symptom of peritoneum irritation, fluctuation, free fluid and gas in cavities and so on).
- To recognize different types of closed injuries.
- To identify acute inflammatory process in soft tissues.
- To detect tissue infiltrate.
- To identify the phase of inflammatory process and determine its spreading degree according to clinical presentation.
- To differ furuncle from carbuncle.
- To determine the fluctuation symptom.
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- To determine primary focus in acute lymphadenitis and thrombophlebitis.
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- To determine a complex of management measures for patients with acute lymphadenitis and thrombophlebitis.
- To perform breast examination.
- To diagnose acute inflammatory process in breast and determine its phase.
- To diagnose acute parotitis.
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- To determine the cause of peritonitis development.
- To identify pleural effusion by percussion and X-ray radiography.
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- To identify the source of bone infection.
- To diagnose different forms of paronychia.
- To determine indications to surgical treatment of paronychia.
- To conduct specific tetanus prophylaxis.
- To conduct specific gas gangrene prophylaxis.
- To put the gauze drainage into a purulent wound correctly.
- To prepare a system for active drainage of a purulent wound.

- To diagnose soft tissue injuries (contusions, sprains, strains).
- To provide first aid for persons with soft tissue injuries.
- To diagnose fracture and dislocation.
- To provide first aid for the injured person with fracture and dislocation.
- To apply the simplest plaster cast.
- To apply the simplest roller bandages to a head, lower and upper limbs.
- To prepare and apply plaster splint.
- To recognize clinical presentation of craniocerebral injury.
- To provide first aid for the injured person with craniocerebral trauma.
- To prepare a set for central venous pressure measurement.
- To reveal intra-abdominal bleeding and hollow organ rupture.
- To read an abdominal X-ray image.
- To provide first aid for the injured person with blunt abdominal trauma.
- To identify hemothorax and pneumothorax.
- To prepare a set for pleural puncture procedure (thoracentesis).
- To recognize signs of continuous intrapleural bleeding

4. Discipline volume and types of learning activities

The duration of the course is 216 hours (6 credits).

Type of learning activities	Total hours	Semesters	
		5	6
Classes (total)	123	72	51
Including:	-	-	-
Lectures	-	-	-
Practical clinical classes (PC)	123	72	51
Seminars (S)	-	-	-
Laboratory classes (LC)	-	-	-
Student self-directed learning (total)	93	72	21
Studying intensity, hours	216	144	72
credits	6	4	2

5. Discipline content

5.1. The content of the discipline sections

№	Name of the discipline	Content of the section

	section	
1.	General issues	Introduction. Asepsis. Antisepsis. Bleeding. Blood transfusion. Current assessment of knowledge. Preoperative period. Surgery day. Postoperative period. Wounds. Burns. Frostbites. Wound disease. Necrosis, ulcers, fistulas. Current assessment of knowledge. Plastic surgery. Basis of surgical oncology. Local anesthesia, novocaine blockages.
2.	Special issues	Purulent infection of soft tissues (furuncle, carbuncle, hydradenitis). Purulent infection of soft tissues (erysipelas, abscess, phlegmon). Purulent infection of lymphatic and venous vessels. Purulent inflammation of glandular organs (mastitis, parotitis). Purulent infection in the abdominal cavity (peritonitis). Chest purulent infection. Purulent diseases of a hand (panaritium, phlegmon) Paraproctitis. Osteomyelitis. Anaerobic infection. Soft tissue injuries. First aid in fractures and dislocations. Management of patients with fractures. Management of patients with dislocations. Desmurgy. Craniocerebral trauma. Abdominal injuries. Chest trauma.

5.2. Discipline sections and classes type

№	Name of the discipline section	Lectures.	Practical classes	laboratory classes	Student self-directed learning	Total hours
1.	General issues	-	72	-	72	144
2	Special issues	-	51	-	21	72

6. Laboratory workshop is not provided.

7. Practical classes (seminars)

№	№ of the discipline section	The subject matter of practical classes (seminars)	Studying intensity (hours)
1.	General questions (autumn semester)	<ol style="list-style-type: none"> 1. Introduction. 2. Asepsis. 3. Antisepsis. 4. Bleeding. 5. Blood transfusion. 	72

		<ol style="list-style-type: none"> 7. Current assessment of knowledge. 8. Preoperative period. 9. Surgery day. 10. Postoperative period. 11. Wounds. 12. Burns, frostbites. 13. Wound disease. 14. Necrosis, ulcers, fistulas. 15. Current assessment of knowledge. 16. Plastic surgery. 17. Basis of surgical oncology. 18. Local anesthesia, novocaine blockages. 19. Final assessment of knowledge. 	
2.	Special issues (spring semester)	<ol style="list-style-type: none"> 1. Purulent infection of soft tissues (furuncle, carbuncle, hydradenitis). 2. Purulent infection of soft tissues (erysipelas, abscess, phlegmon). 3. Purulent infection of lymphatic and venous vessels. 4. Purulent inflammation of glandular organs (mastitis, parotitis). 5. Purulent infection in the abdominal cavity (peritonitis). 6. Chest purulent infection. 7. Purulent diseases of a hand (panaritium, phlegmon). 8. Paraproctitis. 9. Osteomyelitis. 10. Anaerobic infection. 11. Current assessment of knowledge. 12. Soft tissue injuries. First aid in fractures and dislocations. 13. Management of patients with fractures. 14. Management of patients with dislocations. 15. Desmurgy. 16. Craniocerebral trauma. 17. Abdominal injuries. 18. Chest trauma. 	51

		19. Final assessment of knowledge.	
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8. Material and technical support of the discipline

Personal computers, laptops, televisions, video recorders, DVD players, multimedia projectors, videos on surgery. Digital versions of lectures and seminars on surgery, videos of foreign surgical clinics, distributing materials in the form of tests, posters, methodical publications.

9. Information support of the discipline

a) software - licensed software.

Internet sites corresponding to selected topics of the discipline, resources of the University's electronic library.

b) database, information and referral systems and search systems.

1. TEIS - Telecommunication educational and information system.

<http://esystem.rudn.ru/>

1. Educational and scientific information center in the library of RUDN (Scientific library).

<http://lib.rudn.ru/>

2. Medical portal.

Meduniver contains a medical photoatlas, videos on various sections of medicine, medical electronic library.

<http://meduniver.com/>

4. Medical video portal.

The site contains video recordings of lectures from the leading Russian medical schools; surgical procedures with commentaries; speeches at scientific medical congresses and conferences; three-dimensional animated videos that demonstrate the function of various organs and systems; educational materials on fundamental sciences; catalog of medical sites; forum for exchange of views; information about medical institutions.

<http://www.med-edu.ru/>

5. Medline-Catalogue.

The founder of Medline is the U.S. National Library of Medicine (NLM). Medline is the largest open database of medical information in the world. There are over 75% of all the world's medical publications in the catalogue. Medline contains all the articles collected in the three main medical reference books: International Nursing Index, Index Medicus, Index to Dental Literature. <http://www.medline-catalog.ru/>

6. The biomedical journal Medline.ru.

The site contains original articles on various sections of medicine.

<http://www.medline.ru>

10. Educational-and-methodological support of the discipline

a) basic literature

1. Gostishchev V.K. General surgery /The manual. – M.: GEOTAR-MED, 20013.

b) additional educational literature

1. General surgery at the district hospital

http://apps.who.int/iris/bitstream/handle/10665/38534/9241542357_eng_part1.pdf;jsessionid=4E98999CC3D810428DD5EB3A3817BE9B?sequence=1

2. Primary Surgery (Volume one – Non-trauma)

http://www.primary-surgery.org/assets/help_primarysurgery.pdf

11. Guidelines for students on the mastering the discipline (module):

It is required from the student to attend classes, to fulfil assignments of the discipline teacher, to get acquaintance with recommended literature, etc. On student's certification, it is assessed the quality of work in classes, the preparation level for independent activities in the chosen field, the quality of the made assignments and the ability to self-directed learning of educational material.

At practical classes and lectures it is carried out the analysis of related topics using multimedia technology (computer, projector).

Self-directed learning in extracurricular hours can take place both in the classrooms of the department and computer rooms, where the students can study material on presentations and also on computer tests prepared by the department's teachers.

Presentations on lesson's topics can be recorded on CDs or flash cards for student self-directed learning on a home computer.

Teaching aids in electronic form on selected topics are posted at the pages of the department and staff members of the Faculty Surgery Department on the Educational Portal of RUDN University and also on local resources of the electronic library system of RUDN University.

One of the forms of self-directed learning is the preparation of summaries on various course sections and the presentation of reports at the scientific seminars of the department.

Extracurricular self-directed learning includes:

material study on the textbook, teaching aids on paper and electronic media; report preparation on the chosen topic; preparation for knowledge assessment and tests.

Knowledge control

The current control of knowledge and success of the course mastering in full-time education is carried out in the form of an oral questioning or computer testing during practical classes.

Intermediate control of knowledge is carried out at least once a semester. This knowledge assessment is carried out in the form of an oral questioning. On intermediate control, the student should show his knowledge of the studied discipline sections, skills and abilities. It is also monitored for attendance of lectures and practical classes. Knowledge assessment is provided by simple "PASS/FAIL" system.

The student who has fully completed the discipline curriculum is permitted to pass the discipline final certification. The final certification is carried out in the form of an oral questioning.

To assess the educational activities of the students it is used point-rating system and ECTS grades.

The point-rating system is based on knowledge, acquired skills and abilities. The maximum number of points that a student can get during each semester is 100 points what corresponds to 100% of the course mastering. The student receives the basic points for successful studying, high knowledge and abilities, timely passed tests and an exam.

12. Fund of estimated means for students' knowledge assessment on the discipline (module)

GENERAL SURGERY

No№	Name of the section	Control form	Points	Competencies
1	General issues	oral questioning or testing	50	GPC -1,4,5,6,7,10 PC -1,2,3,6 (6.3)
2	Special issues	oral questioning or testing	50	GPC -1,4,5,6,7,10 PC -1,2,3,6 (6.3)

Positive grades, when the course is credited to the student, are grades A, B, C, D and E.

The student who received the grade **FX** on the discipline of the educational program, ought successfully complete the required minimum of tasks (learning works) established by the curriculum as scheduled and deliver the results to the teacher. If the quality of the tasks' implementation is found to be satisfactory, then the final grade FX is increased to E and the student is allowed to further studying.

If the quality of the tasks' implementation remains unsatisfactory, the final grade drops to F and the student is submitted for expulsion. In the case of grade F or FX, the student is presented for expulsion regardless of whether he has any debts on other disciplines.

The programme is prepared in accordance with the requirements of the Educational Standards of Higher Education in RUDN/Federal State Educational Standard.

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