

*Federal State Autonomous Educational Institution of Tertiary Education  
“Peoples Friendship university of Russia”*

*Medical Institute*

Recommended by MCSN

## **PROGRAM OF THE PRACTICAL TRAINING**

**Name of the practical training**

**Surgical Practice: Surgeon's Assistant**

**Recommended for the direction of training/specialty**

**31.05.01 General Medicine**

**Focus of the program**

**General Medicine**

**Graduate qualification**

**Doctor of medicine**

### 1. The purpose of the practical training.

The purpose of the practical training "**Surgeon's Assistant**" is to consolidate and deepen the theoretical training of the student, to acquire practical skills, possessions and skills, to form competencies that make up the content of the professional activity of the assistant surgeon.

### 2. Tasks of practical training

- improvement and consolidation of skills and abilities according to the method of examination of a surgical patient, making a clinical diagnosis and its justification;
- drawing up a plan and interpreting the results of the examination; drawing up a plan for the treatment and prevention of surgical diseases;
- improvement and consolidation of skills and abilities in the design and management of the medical record of an inpatient patient in a surgical hospital;
- consolidation of skills for the reception and discharge of patients;
- mastering and consolidating skills on measures for the implementation of the sanitary and epidemic regime in surgical departments;
- mastering and consolidating skills in therapeutic manipulations provided for by the practice program of the surgery section.

### 3. Place of practical training in the structure of the EP HE:

IV-year students are attached to the doctor of the surgical department and work in the ward under his supervision, supervising from 6 to 12 patients. At the same time, students learn to fill out a medical history (using methods of physical examination of the patient), to establish a diagnosis of the disease, to prescribe the necessary additional methods of special examinations, to prepare patients for operations and to monitor patients in the postoperative period. The work should begin with the presence at the morning medical conference.

The practical training of students takes place in the 8th semester of the IV course and it is based on the theoretical knowledge of the courses: "Propaedeutics of internal diseases", "General surgery", as well as "Faculty therapy" and "Faculty surgery". In addition, medical practice is based on practical knowledge and skills acquired earlier during the passage of nursing practice.

### 4. Forms of practical training "**Surgeon's Assistant**".

Clinical (City clinical hospitals of Moscow)

### 5. Place and time of practical training "**Surgeon's Assistant**".

The practice is conducted at clinical bases in the City clinical hospitals of Moscow. The direct managers of the practice are employees of various departments of the Medical Faculty of the RUDN

### 6. Competences of the student, formed as a result of practical training:

Table 1 shows the previous and subsequent disciplines aimed at the formation of the discipline's competencies in accordance with the competence matrix of the OP VO.

Table 1

#### Previous and subsequent disciplines aimed at the formation of the discipline's competencies

№ p/p	Code and name of competency	Previous disciplines	Subsequent disciplines (groups of disciplines)
<b>Professional competencies</b>			
1	PC-1. Being able to provide emergency or urgent medical care to a patient	Propaedeutics of internal diseases; Faculty therapy;	Faculty therapy; Hospital therapy; Endocrinology;

		General surgery; Faculty Surgery	Faculty Surgery; Hospital surgery
2	PC-2. Being able to examine a patient in order to determine a diagnosis	Propaedeutics of internal diseases; Faculty therapy; General surgery; Faculty Surgery	Faculty therapy; Hospital therapy; Endocrinology; Faculty Surgery; Hospital surgery
3	PC-3. Being able to prescribe treatment and monitor its efficacy and safety	Propaedeutics of internal diseases; Faculty therapy; General surgery; Faculty Surgery	Faculty therapy; Hospital therapy; Endocrinology; Faculty Surgery; Hospital surgery
4	PC-4. Being able to implement and monitor the patient's medical rehabilitation efficacy, including when implementing individual rehabilitation and habilitation programmes for persons with disabilities; assess the patient's ability to work	Propaedeutics of internal diseases; Faculty therapy; General surgery; Faculty Surgery	Faculty therapy; Hospital therapy; Endocrinology; Faculty Surgery; Hospital surgery
5	PC-5. Being able to carry out preventive measures and measures to promote a healthy lifestyle and sanitary and hygiene education among population and monitor their effectiveness	Propaedeutics of internal diseases; Faculty therapy; General surgery; Faculty Surgery	Faculty therapy; Hospital therapy; Endocrinology; Faculty Surgery; Hospital surgery
6	PC-6. Being able to keep medical records and organize the activities of the nursing staff	Propaedeutics of internal diseases; Faculty therapy; General surgery; Faculty Surgery	Faculty therapy; Hospital therapy; Endocrinology; Faculty Surgery; Hospital surgery

The process of studying the discipline is aimed at the formation of the following competencies:

Table 2

### Competencies to be formed

Competencies	Name of competency	Indicators of competency achievement
PC-1	Being able to provide emergency or urgent medical care to a patient	PC-1.1. 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

		<p>sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life.</p> <p>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.</p> <p>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).</p> <p>PC-1.6. Being able to use drugs and medical devices when providing medical care in emergency or urgent forms.</p>
PC -2	Being able to examine a patient in order to determine a diagnosis	<p>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).</p> <p>PC-2.2. Being able to make a preliminary diagnosis and make up a plan of laboratory and instrumental examinations of a patient.</p> <p>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.</p> <p>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> <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 (ISC).</p>
PC -3	Being able to prescribe treatment and monitor its efficacy and safety	<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</p>

		<p>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 -4	Being able to implement and monitor the patient's medical rehabilitation efficacy, including when implementing individual rehabilitation and habilitation programmes for persons with disabilities; assess the patient's ability to work	<p>PC-4.1. Being able to conduct an examination of temporary disability and work as part of a medical commission which examines temporary disability.</p> <p>PC-4.2. Being able to prepare necessary medical documentation to carry out medical and social examination in federal state institutions of medical and social examination.</p> <p>PC-4.3. Being able to carry out medical rehabilitation measures for a patient, including when implementing an individual rehabilitation or habilitation programme for persons with disabilities, 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-4.4. Being able to refer a patient who needs medical rehabilitation to a medical specialist so that they prescribe and carry out medical rehabilitation measures, including when implementing an individual rehabilitation or habilitation programme for persons with disabilities, in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on provision of medical care taking into account the standards of medical care.</p> <p>PC-4.5. Being able to refer a patient who needs medical rehabilitation to a medical specialist so that they prescribe and carry out sanatorium treatment, including when implementing an individual rehabilitation or habilitation programme for persons with disabilities, 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-4.6. Being able to assess the efficacy and safety of medical rehabilitation measures for a patient 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-4.7. Being able to refer a patient with a persistent bodily dysfunction caused by diseases, the consequences of trauma or defects to a medical and social examination.</p>
PC -5	Being able to carry out preventive measures and	<p>PC-5.1. Being able to organize and conduct medical examinations taking into account age, health status, profession in accordance with applicable legislative acts and other documents.</p> <p>PC-5.2. Being able to organize and monitor the immunization of the</p>

	<p>measures to promote a healthy lifestyle and sanitary and hygiene education among population and monitor their effectiveness</p>	<p>adult population against infectious diseases 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-5.3. Being able to carry out medical examination of the adult population aimed at early detection of chronic noncommunicable diseases and the main risk factors for their development in accordance with the current legislative acts and other documents.</p> <p>PC-5.4. Being able to carry out follow-up care of patients with diagnosed chronic noncommunicable diseases.</p> <p>PC-5.5. Being able to prescribe preventive measures to patients taking into account risk factors 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-5.6. Being able to monitor observing preventive measures.</p> <p>PC-5.7. Being able to determine medical indications to introduce restrictive measures (quarantine) and indications for referral to a medical specialist in the event of infectious (parasitic) diseases.</p> <p>PC-5.8. Being able to issue and send an emergency notification to the territorial body of the Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing when an infectious or occupational disease is detected.</p> <p>PC-5.9. Being able to carry out anti-epidemic measures in the event of the occurrence of a focus of infection, including quarantine measures when especially dangerous (quarantine) infectious diseases are detected.</p> <p>PC-5.10. Being able to develop healthy lifestyle programmes, including the ones to reduce alcohol and tobacco consumption, prevent and combat non-medical use of narcotic drugs and psychotropic substances.</p> <p>PC-5.11. Being able to assess the effectiveness of preventive patient care.</p>
PC -6	<p>Being able to keep medical records and organize the activities of the nursing staff</p>	<p>PC-6.1. Being able to draw up a work plan and report on their work, issue a passport for a healthcare (therapeutic) area.</p> <p>PC-6.2. Being able to analyze morbidity, disability and mortality rates to characterize the health of the registered population.</p> <p>PC-6.3. Being able to keep medical records, including in the electronic form.</p> <p>PC-6.4. Being able to monitor the performance of official duties by a district nurse and other medical workers at the disposal.</p> <p>PC-6.5. Being able to provide internal control of quality and safety of medical activities within the scope of employment responsibilities.</p>

As a result of studying the discipline, the student must:

**know:**

- Safety precautions when working in the surgical department, dressing room, operating room
- What is included in the concept of "clinical diagnosis"?
- Why is it necessary to know the scheme of the medical history of a surgical patient?

- What makes it possible to correctly determine the nature of the pathological process?
- The main symptoms of acute appendicitis.
- Complications of acute appendicitis.
- Indications for surgery and for conservative treatment for acute appendicitis.
- The main stages of appendectomy.
- Symptoms of uncomplicated abdominal wall hernia.
- Symptoms of a complicated abdominal wall hernia.
- Indications for surgical treatment of abdominal hernia.
- The main stages of surgery for complicated and uncomplicated abdominal wall hernia.
- Methods of hernia gate plastic surgery for different types of abdominal wall hernias.
- Causes of calculous cholecystitis and its complications.
- The main symptoms of acute cholecystitis and its complications.
- Special research methods for the diagnosis of cholecystitis and its complications.
- Tactics of management of patients with acute cholecystitis.
- The main stages of cholecystectomy.
- Types of operations for various complications of cholecystitis.
- Modern methods of surgical treatment of cholecystitis.
- What contributes to the development of acute pancreatitis?
- The main symptoms of various forms of acute pancreatitis.
- Special research methods used for the diagnosis of acute pancreatitis.
- Indications for surgical treatment of acute pancreatitis.
- Treatment of various forms of acute pancreatitis.
- Forms of chronic pancreatitis.
- Special research methods for the detection of chronic pancreatitis.
- Indications for surgical treatment of chronic pancreatitis.
- The main types of surgical interventions for chronic pancreatitis.
- The main symptoms of liver diseases for which surgical treatment is indicated.
- Special research methods in the diagnosis of surgical liver diseases.
- Principles of treatment of surgical liver diseases.
- Clinical signs of peripheral artery diseases.
- Special research methods used to detect occlusion of the arteries of the lower extremities.
- The choice of the method of treatment of patients with occlusive diseases of the arteries of the lower extremities.
- Clinical manifestations of varicose veins.
- Indications for surgical treatment of patients with varicose veins of the lower extremities.
- Methods of treatment of varicose veins of the lower extremities.
- The main symptoms of acute thrombophlebitis of the lower extremities.
- Indications for surgical treatment of acute thrombophlebitis of the lower extremities.
- The main clinical signs of esophageal diseases.
- Special research methods used to diagnose diseases of the esophagus.
- Principles of treatment of patients with esophageal tumor.
- Indications for surgical treatment of cardiospasm.
- Treatment of esophageal diverticula.
- Treatment of patients with burns of the esophagus.
- The methodology of using the Blackmore probe.
- Differential diagnosis of esophageal diseases.
- Methods of gastrostomy formation.
- Precancerous diseases of the stomach and methods of their diagnosis.
- Stages of stomach cancer.

- The clinical picture of stomach cancer.
- Principles of treatment of patients with stomach cancer.
- Indications for conservative treatment of stomach cancer.
- Radical and palliative operations for stomach cancer.
- Clinical manifestations of benign intestinal diseases.
- Special research methods used for the diagnosis of benign intestinal diseases.
- Complications of intestinal diverticula.
- Surgical interventions for benign intestinal diseases.
- The main symptoms characteristic of colon cancer.
- Special research methods used to detect colon cancer.
- Indications for surgical treatment of colon cancer.
- Complications of colon cancer and their diagnosis.
- Types of radical and palliative operations for colon cancer.
- Clinical signs of hemorrhoids, tumors and cracks of the rectum.
- The importance of finger examination for the diagnosis of rectal diseases.
- The device of the rectoscope and the stages of rectoromanoscopy.
- Methods of surgical treatment for hemorrhoids.
- Indications for surgical treatment of hemorrhoids.
- Types of radical and palliative operations for rectal cancer.
- Classification of intestinal obstruction.
- The main symptoms of intestinal obstruction.
- Special research methods for the diagnosis of acute intestinal obstruction.
- Radiological signs of intestinal obstruction.
- Methods of conservative and surgical treatment of intestinal obstruction, indications for them.
- The importance of a siphon enema in the complex of conservative treatment of intestinal obstruction.
- Causes of acute peritonitis.
- Clinical signs of acute peritonitis.
- Classification of acute peritonitis.
- Special research methods for the detection of acute peritonitis.
- Indications for surgical treatment for peritonitis.
- Ways to complete the operation in acute peritonitis.
- Management of patients after surgery performed for peritonitis.
- Methods of physical and special studies used for the diagnosis of breast tumors.
- The technique of performing a puncture biopsy of a breast tumor.
- Signs of different stages of breast cancer.
- Methods of surgical treatment for breast tumors.
- Preparation of the patient for surgery for a benign breast tumor.
- Methods of diagnosing thyroid diseases.
- Classification of goiter.
- Indications for surgical treatment of a patient with goiter.
- Preparation of the patient for surgery for thyrotoxic goiter.
- Complications after thyroid surgery.
- What acute surgical diseases of the abdominal cavity organs can occur with an atypical clinical picture and why?
- What will help in the differential diagnosis of acute surgical diseases of the abdominal cavity?
- Special research methods that will help in the differential diagnosis of acute diseases of the abdominal cavity.



**To be able to:**

- Navigate through the patient's complaints to determine the location of the pathological process.
- Use the basic physical methods of examination of the patient to establish the diagnosis of the disease.
- Make a plan of examination of the patient to confirm the diagnosis of the disease.
- Determine the therapeutic tactics for a surgical disease.
- Determine the severity of the patient's condition according to clinical criteria (APACHE scale, SAPS)
- Identify the symptoms of acute appendicitis.
- Diagnose appendicitis with a typical location of the appendix.
- Diagnose a hernia of the abdominal wall.
- Diagnose a complication of an abdominal hernia.
- Choose the right treatment strategy for abdominal hernia (determine the indications and contraindications for surgery).
- Examine the patient to detect acute cholecystitis.
- Read ultrasonograms of the biliary system.
- Read radiographs of the biliary system.
- Identify complications of calculous cholecystitis.
- Choose the tactics of management of patients with calculous cholecystitis.
- Identify the symptoms of acute pancreatitis.
- Determine the form of acute pancreatitis.
- Establish indications for surgical treatment of acute pancreatitis.
- Diagnose various forms of chronic pancreatitis.
- Diagnose cirrhosis of the liver, liver tumor, liver echinococcus, portal hypertension syndrome.
- Use a Blackmore probe for bleeding from esophageal varicose veins.
- Identify the main clinical signs of lesions of the arteries of the lower extremities.
- Read angiograms when the arteries of the lower extremities are affected.
- Diagnose varicose veins and acute thrombophlebitis of the lower extremities.
- Identify the state of the venous system of the lower extremities.
- Read radiographs for various diseases of the esophagus.
- Identify esophageal diseases based on the patient's complaints, the clinical picture and the data of special research methods.
- Diagnose peptic ulcer of the stomach and duodenum.
- Diagnose a perforation of the wall of the stomach or duodenum.
- Decide on the choice of therapeutic tactics for peptic ulcer of the stomach and duodenum.
- Identify clinical signs of stomach cancer.
- Read radiographs when the stomach is affected by a cancerous process.
- According to the patient's examination, determine the stage of the tumor process.
- Make a plan for examining a patient with suspected colon cancer.
- Read irrigograms for colon cancer.
- On the basis of clinical signs, diagnose rectal disease in a timely manner.
- Perform a rectal examination.
- Prepare a rectoscope for the examination of the intestine.
- Care for patients with colostomy.
- Timely diagnose acute intestinal obstruction.
- Perform a siphon enema, evaluate its effect.
- Identify the symptoms of acute peritonitis.

- Determine the cause of acute peritonitis.
- Apply knowledge on the diagnosis of acute surgical diseases of the abdominal organs for the differential diagnosis of these diseases.

**To master:**

- Navigate through the patient's complaints to determine the location of the pathological process.
- Use the basic physical methods of examination of the patient to establish the diagnosis of the disease.
- Make a plan of examination of the patient to confirm the diagnosis of the disease.
- To be determined in the treatment tactics for a surgical disease.
- Determine the severity of the patient's condition according to clinical criteria (APACHE scale, SAPS)
- Identify the symptoms of acute appendicitis.
- Diagnose appendicitis with a typical location of the appendix.
- Diagnose a hernia of the abdominal wall.
- Diagnose a complication of an abdominal hernia.
- Choose the right treatment tactics for abdominal hernia (determine the indications and contraindications for surgery).
- Examine the patient to detect acute cholecystitis.
- Read ultrasonograms of the biliary system.
- Read radiographs of the biliary system.
- Identify complications of calculous cholecystitis.
- Choose the tactics of management of patients with calculous cholecystitis.
- Identify the symptoms of acute pancreatitis.
- Determine the form of acute pancreatitis.
- Establish indications for the surgical treatment of acute pancreatitis.
- Diagnose various forms of chronic pancreatitis.
- Diagnose cirrhosis of the liver, liver tumor, liver echinococcus, portal hypertension syndrome.
- Use a Blackmore probe for bleeding from esophageal varicose veins.
- Identify the main clinical signs of lesions of the arteries of the lower extremities.
- Read angiograms when the arteries of the lower extremities are affected.
- Diagnose varicose veins and acute thrombophlebitis of the lower extremities.
- Identify the state of the venous system of the lower extremities.
- Read radiographs for various diseases of the esophagus.
- Identify esophageal diseases based on the patient's complaints, the clinical picture and the data of special research methods.
- Diagnose peptic ulcer of the stomach and duodenum.
- Diagnose a perforation of the wall of the stomach or duodenum.
- Be determined in the choice of therapeutic tactics for peptic ulcer of the stomach and duodenum.
- Identify clinical signs of stomach cancer.
- Read radiographs when the stomach is affected by a cancerous process.
- According to the patient's examination, determine the stage of the tumor process.
- Make a plan for the examination of a patient with suspected colon cancer.
- Read irrigograms for colon cancer.
- On the basis of clinical signs, diagnose rectal disease in a timely manner.
- Perform a finger examination of the rectum.
- Prepare a rectoscope for the examination of the intestine.

- Care for patients with colostomy.
- Timely diagnose acute intestinal obstruction.
- Perform a siphon enema, evaluate its effect.
- Identify the symptoms of acute peritonitis.
- Determine the cause of acute peritonitis.
- Apply knowledge on the diagnosis of acute surgical diseases of the abdominal organs for the differential diagnosis of these diseases.

## 7. Structure and content of the practical training “Surgical Practice: Surgeon's Assistant”.

The total labour input of training practice is **6 credit units**.

№ p/p	Stages of the practice	Types of production work, in practice, including independent work of students and labor intensity (in hours)			Forms of current control
		Practical classes	CPC	Workload (hours)	
1	Safety instructions. Safety precautions in the surgical department. Safety precautions in the diagnostic department. Safety precautions in the operating unit.	4	2	6	Journal
2	Fundamentals of the organization of surgical care.	8	4	12	Journal
3	Research methods in surgery	8	4	12	Journal
4	Working as a physician assistant in surgical departments of a clinical hospital	124	62	198	Journal
	<b>Total</b>	<b>144</b>	<b>72</b>	<b>216</b>	

## 8. Educational, research and scientific-production technologies used during the productive practice “Surgical Practice: Surgeon's Assistant”.

Educational, research and production technologies should be used in the process of practical training.

Educational technologies during the internship include:

- safety instructions; organization tour; primary briefing in the workplace;
- use of library stock;
- organizational and informative technologies (attendance at meetings, conferences, etc.);
- verbal communication technologies (conversations with managers, specialists);
- mentoring (work in the period of practice as a student of an experienced specialist);
- information and communicative technologies (information from the Internet, e-mail, etc.);
- work in the library (clarification of the content of educational and scientific problems, professional and scientific terms, indicators), etc.

Scientific and production technologies during internships include: innovative technologies used in the organization, studied and analysed by students in the course of practice.

Research technologies in practice include: defining a problem, object and subject of research, setting a research task; development of research tools; observation, measurement, fixation of results; collection, processing, analysis and preliminary systematization of factual and literary material.

## **9. Teaching and methodological support for students' independent work during practical training "Surgical Practice: Surgeon's Assistant".**

The equipment necessary for the successful completion of practical training is presented by the departments of various profiles of clinical hospitals and the departments of the medical institute responsible for the practice.

Standard equipment of medical facilities departments is transferred to the next course of study at the medical faculty of the University.

## **10. Information support of the discipline**

**a) program software** licensed software. Sites in the Internet, corresponding to individual topics of the discipline, resources of the university's electronic library d) databases, information and reference and search systems.

### **б) databases, reference and search systems**

1. TUIS - Telecommunication training and information system.

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

2. EBS of the RUDN University and third-party EBS to which university students have access on the basis of concluded agreements:

- Electronic library system RUDN - EBS RUDN <http://lib.rudn.ru/MegaPro/Web>

- EBS "University Library Online" <http://www.biblioclub.ru>

- EBS Urait <http://www.biblio-online.ru>

- EBS "Student Consultant" [www.studentlibrary.ru](http://www.studentlibrary.ru)

- EBS «JILan» <http://e.lanbook.com/>

3. Portal of gastrointestinal endoscopy.

The portal contains constantly updated videos, reports, articles, messages on diagnostic and operative endoscopy; there is an extensive selection of links to Internet resources on endoscopy, gastroenterology, search engines for access to medical journals.

<http://www.gi-endo.ru/>

4. Website ЭНДОСКОПИЯ.RU.

A website where you can find complete and professional information about modern achievements, opportunities and prospects of diagnostic and therapeutic endoscopy. Of particular interest is the subsection "Methodological recommendations".

<http://www.endoscopy.ru/>

5. Medical portal MedUniver.

The portal contains a medical photo atlas, videos on various sections of medicine, a medical electronic library.

<http://meduniver.com/>

6. Portal about surgery.

It contains materials on the most common surgical diseases (clinic, diagnosis and treatment).

<http://www.hyrurg.com/>

7. Medical video portal.

The site presents video recordings of lectures from leading Russian medical universities; surgical operations with comments; speeches at scientific medical congresses and conferences; three-dimensional animated videos that clearly demonstrate the work of various organs and systems; educational materials on basic sciences; a catalog of medical sites; a forum for exchanging opinions; information about medical institutions.

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

#### 8. Medline catalog.

The founder of Medline is the National Medical Library of the USA. Medline is the largest open database of medical information in the world, the Medline catalog includes more than 75% of all world medical publications. MedLine contains all the articles collected in three main medical reference books: International Nursing Index, Index Medicus, Index to Dental Literature.

<http://www.medline-catalog.ru/>

#### 9. Biomedical Journal Medline.ru.

The site contains original articles on various sections of medicine. <http://www.medline.ru>

### 11. Educational-methodical support of the discipline.

#### a) basic literature:

1. Кузин М.И., Кузин Н.М., Кубышкин В.А. и др. Хирургические болезни. - 5-е изд., перераб. и доп. – М.: ГЭОТАР-Медиа, 2020. - 1024 с.: ил. Учебник Гриф МЗ РФ
2. Под редакцией Савельева В.С., Кириенко А.И. Хирургические болезни. – М.: ГЭОТАР-МЕДИА, 2017-720с., 2 тома. Учебник
3. Пауткин Ю.Ф. Климов А.Е. Погасов А.Г. Практика студентов в хирургической клинике. – М.: И-во РУДН, 2011. Учебное пособие

#### b) additional literature:

1. Хирургические болезни. Под редакцией А.Ф.Черноусова.,М.: ГЭОТАР-Медиа, 2014 г.
2. И.И. Затевахин, А.И. Кириенко, В.А. Кубышкин., Абдоминальная хирургия. Национальное руководство. - М.: ГЭОТАР-МЕДИА, 2016 - 912с
3. В.С. Савельев., А.И. Кириенко., Национальное Руководство «Клиническая хирургия» в 3-х томах.. - М.: ГЭОТАР-Медиа, 2008- 2010 гг.
4. Федоров А.Г., Давыдова С.В., Иванов В.А., Климов А.Е. Острый панкреатит. Панкреонекроз. Учебное пособие. М. 2021. Издательство РУДН.
5. Климов А.Е., Бархударов А.А., Попов В.С. и др. Сборник тестовых заданий по дисциплине « Факультетская хирургия». М. 2019. Издательство РУДН.
6. Шайн М., Роджерс П., Ассалия А. «Здравый смысл в неотложной абдоминальной хирургии, 3-е издание, Русский Суржинет, 2015 г., 651 с.
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### 12. Methodological recommendations for the organization of the practical training:

Students work from 09:00 to 15:00 (total time is 6 hours), but the working hours can be changed according to the working hours of the medical staff of the medical institution. Medical practice is conducted under the supervision of a doctor, to whom the head of the surgical department attaches students. Working as a doctor's assistant, the student supervises 6-12 patients. During the period of practical training in surgery, students work in the emergency department, in the wards of the surgical department, dressing departments and operating rooms. He fills in the medical records after examining patients using physical methods, formulates a clinical diagnosis, if necessary, uses the methods of special research of patients, actively

participating in these studies. Daily monitoring of the patient is recorded by entries in diaries. In consultation with the attending physician and under his supervision, prescribes the treatment of the patient. If it is necessary to perform surgical treatment, he prepares the patient for the upcoming operation, takes part in the surgical intervention as an assistant, leads the patient in the postoperative period, both in the intensive care unit and in the surgical ward, taking an active part in dressings. Observing the patient in the postoperative period, the student should pay attention to the functional state of the patient's organs and systems (measuring body temperature, blood pressure, determining the pulse and respiratory rate, the amount of urine excreted), monitor the functioning of drains.

Working in the department of purulent surgical infection, a student under the supervision of medical personnel (a nurse or a doctor) performs bandages of patients using various methods of treating purulent wounds. When supervising patients with a purulent surgical infection, he carefully fills out a temperature sheet in the medical history.

While working in the traumatology department, the student masters the methods of treating various types of bone fractures (manual and instrumental reposition, skeletal traction), masters the technique of applying plaster bandages, supervises patients with traumatic brain injury.

In the reception department, students master the features of the examination of urgent patients requiring emergency surgical care.

During the medical practice in surgery, the student must take part in two night shifts, actively helping doctors by participating in all medical activities.

### **13. Evaluation fund for the intermediate certification of students in practical training “Surgical Practice: Surgeon's Assistant”.**

Materials for assessing the level of mastering practical material on industrial practice “Surgical Practice: Surgeon's Assistant”, including a list of competencies indicating the stages of their formation, a description of indicators and criteria for assessing competencies at various stages of their formation, a description of the assessment scales, typical control tasks or other materials necessary to assess knowledge, skills, techniques and (or) experience of activity, characterizing the stages of competencies formation in the process of mastering the educational program. Methodological materials that define procedures for assessing knowledge, skills, and (or) the experience of activities that characterize the stages of competencies formation are fully developed and available for students at the discipline page in the TUIS electronic system of the RUDN University.

The program was drawn up in accordance with the requirements of the Federal State Educational Standard of Higher Education.

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