Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
RUDN University

Institute of Medicine

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

General Surgery
course title

Recommended by the Didactic Council for the Education Field of:

31.05.01 General Medicine
field of studies / speciality code and title

The course instruction is implemented within the professional education programme of higher education:

General Medicine
higher education programme profile/specialisation title

1. COURSE GOAL(s)

The goal of the course "General Surgery" is to equip students with the knowledge to master skills in clinical examination of surgical patients, to get knowledge of surgical treatment principles and semiotics of basic surgical diseases.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) "General Surgery" is aimed at the development of the following competences /competences in part: GPC-1, GPC-4, GPC-5, GPC-6, GPC-7, GPC-10, PC-1, PC-2, PC-3, PC-6.

Table 2.1. List of competences that students acquire through the course study

Competence code	Competence descriptor	Competence formation indicators (within this course)
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	GPC-5.1. Mastering the algorithm of clinical, laboratory and functional diagnosis when dealing with professional tasks.

	processes in the human body to solve 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	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 the operation principles of modern IT and use them to solve professional tasks	GPC-10.1. Being able to use information technology in professional activity.
		GPC-10.2 Being able to observe the information security rules in professional activity.
		GPC-10.3. 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	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 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 toprovide 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.

		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.
		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.
		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).
PC-3	Being able to prescribe treatment and monitor its efficacy and safety	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.
		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.
		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.

		PC-3.4. Being able to assess the efficacy and safety of the use of drugs, medical devices, medical nutrition and other treatment methods.
		PC-3.5. Being able to provide palliative care in collaboration with medical specialists and other healthcare professionals.
		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.
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.

* To be filled in according to the competence matrix of the higher education programme.

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course refers to the core/variable/elective* component of (B1) block of the higher educational programme curriculum.

* - Underline whatever applicable.

Within the higher education programme students also master other (modules) and / or internships that contribute to the achievement of the expected learning outcomes as results of the course study.

Table 3.1. The list of the higher education programme components/disciplines that contribute to the achievement of the expected learning outcomes as the course study results

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
GPC-1	Being able to implement moral and legal norms, ethical and deontological principals in professional activity	Anatomy Biochemistry	Faculty Therapy Occupational diseases
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	General Surgery Introductory practice for obtaining primary professional skills and abilities: patient care	Endocrinology Traumatology Orthopaedics Obstetrics and Gynaecology
GPC-5	Being able to assess morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks	Biochemistry, Biology, Anatomy, Histology, Embryology, Cytology Normal physiology	Topographic anatomy and operative surgery Neurology, Medical genetics, Neurosurgery, Faculty therapy, Obstetrics and Gynaecology

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	Health and safety Immunology	Topographic Anatomy and Operative Surgery Faculty therapy Introductory practice on obtaining primary professional skills: patient care
GPC -7	Being able to prescribe treatment and monitor its efficacy and safety	Practice for obtaining primary professional skills: Assistant to junior medical staff	Faculty surgery, Hospital surgery, Paediatric surgery, Traumatology, Orthopaedics, Neurology, Medical genetics, Neurosurgery
GPC -10	Being able to understand the operation principles of modern IT and use them to solve professional tasks	Biochemistry Immunology	Faculty surgeryOccupational diseases
PC-1	Being able to provide emergency or urgent medical care to a patient	Health and safety	Faculty surgery, Hospital therapy Hospital surgery, Paediatric surgery Topographic anatomy and Operative surgery Neurology, Medical genetics, Neurosurgery
PC-2	Being able to examine a patient in order to determine a diagnosis	Radiation diagnostics	Faculty surgery, Hospital therapy, Hospital surgery, Paediatric surgery
PC-3	Being able to prescribe treatment and monitor its efficacy and safety	Propaedeutic of internal diseases	Faculty surgery, Hospital therapy, Hospital surgery, Paediatric surgery
PC-6	Being able to keep medical records and organize the activities of the nursing staff	Propaedeutic of internal diseases	Practice of surgical profile: Assistant surgeon Polyclinic therapy General medical practice: assistant to an outpatient clinic doctor, Assistant physician of the therapeutic profile: assistant physician therapist

* To be filled in according to the competence matrix of the higher education programme.

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course "General Surgery" is 6 credits (216 academic hours).

*Table 4.1. Types of academic activities during the periods of higher education programme mastering (__**full-time training**__)**

Type of learning activities		Total hours	Semesters	
			5	6
Contact academic hours		**123**	**72**	**51**
Including:				
Lectures (LC)		-	-	-
Lab work (LW)		123	72	51
Seminars (workshops/tutorials) (S)		-	-	-
Self-studies		75	63	12
Evaluation and assessment (exam/passing/failing grade)		18	9	9
Course workload	academic hours	**216**	**144**	**72**
	credits	**6**	**4**	**2**

* To be filled in according to the competence matrix of the higher education programme.

5. COURSE CONTENTS

Table 5.1. Course contents and academic activities types

Course module title	Course module contents (topics)	Academic activities types
Module 1 General questions	Asepsis. Antiseptics. Bleeding. Blood transfusion. Colloquium. Preoperative period. Operation day. postoperative period. Wounds. Burns. Frostbite. Wound disease. Necrosis, ulcers, fistulas. Colloquium. Plastic surgery. Fundamentals of surgical oncology. Local anaesthesia, novocaine blockade.	LW
Module 2 Specific questions	Purulent infection of soft tissues (furuncle, carbuncle, hidradenitis). Purulent infection of soft tissues (erysipelas, abscess, phlegmon). Purulent infection of the lymphatic and blood vessels (lymphadenitis, lymphangitis, thrombophlebitis). Purulent inflammation of the	LW

	glandular organs (mastitis, parotitis). Purulent infection of the abdominal cavity (peritonitis). Purulent infection of the chest. Purulent diseases of the hand (panaritium, phlegmon). Paraproctitis. Osteomyelitis. anaerobic infection. Soft tissue injuries. Providing first aid for fractures and dislocations. Fracture treatment. Dislocation treatment. Desmurgy. Traumatic brain injury. Injuries to the abdominal organs. Chest injuries.	

* - to be filled in only for **full** -time training: *LC - lectures; LW - lab work; S - seminars.*

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Classroom equipment and technology support requirements.

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
Lecture	A classroom for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations.	Software: Microsoft products (OS, office suite, including MSOffice/Office 365), laptops, multimedia projectors. Surgery videos. Digital versions of lectures and seminars on surgery, video materials from foreign surgical clinics, handouts in the form of tests, posters, methodological publications.
Lab work	A classroom for laboratory work, individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and equipment.)	Software: Microsoft products (OS, office suite, including MSOffice/Office 365), laptops, multimedia projectors. Surgery videos. Digital versions of lectures and seminars on surgery, video materials from foreign surgical clinics, handouts in the form of tests, posters, methodological publications.
Seminar	A classroom for conducting seminar-type classes, group and individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and	Software: Microsoft products (OS, office suite, including MSOffice/Office 365), laptops, multimedia projectors. Surgery videos. Digital versions of lectures and seminars on surgery, video materials from foreign surgical clinics, handouts in the form of tests, posters, methodological publications.

	technical means for multimedia presentations.	
Computer Lab	A classroom for conducting seminar-type classes, group and individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and technical means for multimedia presentations.	Software: Microsoft products (OS, office suite, including MSOffice/Office 365), laptops, multimedia projectors. Surgery videos. Digital versions of lectures and seminars on surgery, video materials from foreign surgical clinics, handouts in the form of tests, posters, methodological publications.
Self-studies	A classroom for students' independent work (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to the EIOS.	Software: Microsoft products (OS, office suite, including MSOffice/Office 365), laptops, multimedia projectors. Surgery videos. Digital versions of lectures and seminars on surgery, video materials from foreign surgical clinics, handouts in the form of tests, posters, methodological publications.

* The premises for students' self-studies are subject to **MANDATORY** mention

7. RESOURCES RECOMMENDED FOR COURSE STUDY

Main readings:

1. V.K. Gostishcev, General surgery, Geotar-Med, 2020
2. Manual of surgery, Alexis Thomson, sixth edition revised
3. Oxford assess and progress clinical surgery
4. Klimov A.E., Pautkin Yu.F. A guide to practical classes in general surgery. M., 2015, RUDN Publishing House. (Part 1, Part 2, Part 3).
5. Klimov A.E., Pautkin Yu.F. General surgery. Textbook. M. 2015. RUDN Publishing House (in 2 parts).

Additional readings:

1. Klimov A.E., Pautkin Yu.F., Barkhudarov A.A. General surgery. Lecture notes. M. 2016.
2. General surgery at the district hospital
3. Basic surgical techniques – 6th edition 2010
4. Pocket Guide to the Operating room

Database, information and referral systems and search systems.
1. TEIS - Telecommunication educational and information system.
        http://esystem.rudn.ru/
2. ELS of RUDN University and third-party ELS, to which university students have access on the basis of concluded agreements:
  - RUDN Electronic Library System - RUDN EBS http://lib.rudn.ru/MegaPro/Web
  - ELS "University Library Online" http://www.biblioclub.ru
  - EBS Yurayt http://www.biblio-online.ru
  - ELS "Student Consultant" www.studentlibrary.ru
  - EBS "Lan" http://e.lanbook.com/
3. Gastrointestinal endoscopy portal.

The portal contains constantly updated videos, reports, articles, reports 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 ENDOSCOPY.RU.

A website where you can find complete and professional information about modern achievements, possibilities 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 branches of medicine, and a medical electronic library.

http://meduniver.com/

6. Portal about surgery.

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

http://www.hyurg.com/

7. Medical video portal.

The site contains video recordings of lectures from leading Russian medical universities; surgical operations with comments; presentations at scientific medical congresses and conferences; three-dimensional animated videos that clearly demonstrate the work of various organs and systems; educational materials on fundamental sciences; directory of medical sites; a forum for the exchange of views; information about medical institutions.

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

8. Medline catalog.

The founder of "Medline" is the National Library of Medicine USA. Medline is the largest open database of medical information in the world, Medline's catalog includes more than 75% of all world medical publications. MedLine contains all the articles collected in the three main medical reference books: InternationalNursingIndex, IndexMedicus, Index to DentalLitherature.

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

9. Biomedical journal Medline.ru.

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

Training toolkit for self- studies to master the course *:

The set of lectures on the course "General Surgery"

* The training toolkit for self- studies to master the course is placed   on the course page in the university telecommunication training and information system under the set procedure.

8. ASSESSMENT TOOLKIT AND GRADING SYSTEM* FOR EVALUATION OF STUDENTS' COMPETENCES LEVEL UPON COURSE COMPLETION

The assessment toolkit and the grading system* to evaluate the competences formation level (GPC-1, GPC-4, GPC-5, GPC-6, GPC-7, GPC-10, PC-1, PC-2, PC-3, PC-6) upon the course study completion are specified in the Appendix to the course syllabus.

* The assessment toolkit and the grading system are formed on the basis of the requirements of the relevant local normative act of RUDN University (regulations / order).

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