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**Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
NAMED AFTER PATRICE LUMUMBA
RUDN University**

Institute of Medicine

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

COURSE SYLLABUS

HOSPITAL SURGERY, PEDIATRIC SURGERY

(course title)

Recommended by the Didactic Council for the Education Field of:

31.05.01 General Medicine

(field of studies/specialty code and title)

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

General Medicine

(higher education programme profile/ specialization title)

1. COURSE GOAL(s)

The course "Hospital Surgery, Pediatric Surgery" is part of the "General Medicine" specialty program on field of studies 31.05.01 "General Medicine," and is studied in semesters 9, 10, 11, and 12 of years 5 and 6. This course is offered by the Department of Hospital Surgery with the Course of Pediatric Surgery. The course consists of 4 sections and 45 topics and focuses on modern approaches to the diagnosis and treatment of surgical diseases in patients of various age groups, including congenital anomalies and the consequences of traumatic injuries. This course develops professional competencies in differential diagnosis, justifying treatment strategies (conservative and surgical), and providing emergency medical care for life-threatening conditions in a hospital setting.

The purpose of mastering the course is to develop systematic theoretical knowledge and applied skills in the field of preliminary diagnostics, determining optimal treatment tactics and timely provision of emergency care in cases of the most common surgical diseases, congenital malformations, traumatic injuries and acute life-threatening conditions.

2. REQUIREMENTS FOR LEARNING OUTCOMES

The course is aimed at the development of the following competences: GPC-4, PC-1, PC-2, PC-3, PC-4, 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-4	Capable of applying medical products, provided for by the procedure providing medical care, and carry out examination of the patient for the purpose making a diagnosis	GPC-4.1. Able to use medical devices in accordance with current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, assistance considering the standards of medical care. GPC-4.2. Able to evaluate effectiveness and safety use of medical devices. GPC-4.3. Possess the technique of performing typical medical procedures using medical devices provided for in the procedures for providing medical care.
PC-1	Able to provide medical care to the patient in urgent or emergency forms	PC-1.1. Able to assess the condition of a patient requiring urgent or emergency medical care. PC-1.2. Able to recognize conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and requiring emergency medical care. PC-1.3. 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. Able to recognize conditions that pose a threat to the patient's life, including conditions of clinical death (stopping the vital functions of the

Competence code	Competence descriptor	Competence formation indicators (within this course)
		<p>human body (blood circulation and / or respiration), requiring emergency medical care.</p> <p>PC-1.5. Able to provide emergency medical care to patients in conditions that pose a threat to the patient's life, including clinical death (stopping the vital functions of the human body (blood circulation and/or respiration).</p> <p>PC-1.6. Able to use medicines and medical devices in the provision of medical care in emergency or urgent forms.</p>
PC-2	Able to exam the patient in order to establish a diagnosis	<p>PC-2.1. Masters the skills to collect complaints, anamnesis of the patient's life and illness, as well as to conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation).</p> <p>PC-2.2. Able to formulate a preliminary diagnosis and draw up a plan for laboratory and instrumental examinations of the patient.</p> <p>PC-2.3. Able to refer the patient for laboratory examination if there are medical indications in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care.</p> <p>PC-2.4. Able to refer the patient for an instrumental examination if there are medical indications in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care.</p> <p>PC-2.5. Able to refer the patient to a consultation with specialists if 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-2.6. Able to refer a patient for specialized medical care in an inpatient setting or in a day hospital if 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. Able to make a differential diagnosis with other diseases/conditions, including emergencies, as well as establish a diagnosis</p>

Competence code	Competence descriptor	Competence formation indicators (within this course)
		based on the current International Statistical Classification of Diseases and Related Health Problems.
PC-3	Able to prescribe treatment and monitor its effectiveness and safety	<p>PC-3.1. 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. Able to prescribe medicines, 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. 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. Able to evaluate the effectiveness and safety of the use of drugs, medical devices, clinical nutrition and other methods of treatment.</p> <p>PC-3.5. Able to provide palliative care in cooperation with medical specialists and other medical professionals.</p> <p>PC-3.6. Able to organize personalized treatment of the patient, including pregnant women, elderly and senile patients, evaluate the effectiveness and safety of treatment.</p>
PC-4	Capable of implementing and monitoring the effectiveness of the patient's medical rehabilitation, including the implementation of individual rehabilitation or habilitation programs for people with disabilities, assessing the patient's ability to carry out work activities	<p>PC-4.1. Able to conduct an examination of temporary disability and work as part of a medical commission that carries out an examination of temporary disability</p>

Competence code	Competence descriptor	Competence formation indicators (within this course)
PC-6	Capable of maintaining medical records and organizing the activities of nursing staff at their disposal	PC-6.3. Able to maintain medical documentation, including in electronic form. PC-6.4. Able to monitor the performance of job duties by the district nurse and other medical workers at his disposal. PC-6.5. Able to ensure internal control of the quality and safety of medical activities within the scope of job responsibilities.

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-4	Capable of applying medical products, provided for by the procedure providing medical care, and carry out examination of the patient for the purpose making a diagnosis	Biotechnology; General surgery; Pharmacology; Topographic anatomy and operative surgery; Neurology, medical genetics, neurosurgery; Radiation diagnostics; Bioorganic chemistry; Physics; Chemistry; Introductory practice on receiving primary professional skills: nursing (simulation center); Introductory practice on receiving primary professional skills and skills: nursing; Practice on receiving primary professional skills and abilities: assistant	

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
		junior medical personnel; Diagnostic practice profile: ward assistant nurse; Practice in emergency medical manipulations (simulation center); Practice on receiving primary professional skills and experience professional activity: procedural assistant nurse;	
PC-1	Able to provide medical care to the patient in urgent or emergency forms	Ophthalmology; Propaedeutics of internal diseases; Obstetrics and gynecology; General surgery; Faculty Therapy; Faculty of Surgery; Neurology, medical genetics, neurosurgery; Emergency medicine for life-threatening conditions; Urology; Diagnostic practice profile: ward assistant nurse; Practice in emergency medical manipulations (simulation center); Practice on receiving primary professional skills and experience professional activity: procedural assistant nurse; Surgical practice profile: medical assistant surgeon; Obstetrics and gynecology practice: gynecologist assistant;	

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
PC -2	Able to exam the patient in order to establish a diagnosis	Medical enzymology**; Molecular genetics in practical biology and medicine**; Ophthalmology; Propaedeutics of internal diseases; Medical elementology; Obstetrics and gynecology; Immunology; Otorhinolaryngology; General surgery; Faculty Therapy; Faculty of Surgery; Microbiology, virology; Pathophysiology, clinical pathophysiology; Neurology, medical genetics, neurosurgery; Evidence-based medicine; Radiation diagnostics; Dermatovenerology; Molecular genetic methods; Pathological anatomy, clinical pathological anatomy; Urology; Surgical practice profile: medical assistant surgeon; Obstetrics and gynecology practice: gynecologist assistant;	
PC -3	Able to prescribe treatment and monitor its effectiveness and safety	Introduction to Nutrition**; Ophthalmology; Obstetrics and gynecology; Otorhinolaryngology; Faculty Therapy; Pharmacology; Faculty of Surgery;	

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
		Fundamentals of integrative medicine**; Neurology, medical genetics, neurosurgery; Dermatovenerology; Basics of therapeutic nutrition; Clinical Trials**; Clinical researches**; Urology; Surgical practice profile: medical assistant surgeon; Obstetrics and gynecology practice: gynecologist assistant;	
PC -4	Capable of implementing and monitoring the effectiveness of the patient's medical rehabilitation, including the implementation of individual rehabilitation or habilitation programs for people with disabilities, assessing the patient's ability to carry out work activities	Ophthalmology; Propaedeutics of internal diseases; Obstetrics and gynecology; Bioethics**; General surgery; Faculty Therapy; Faculty of Surgery; Public health and healthcare, economics healthcare; Radiation diagnostics; Biostatistics; Urology; Introductory practice on receiving primary professional skills and skills: nursing (simulation center); Introductory practice on receiving primary professional skills and skills: nursing; Practice on receiving primary professional skills and abilities: assistant junior medical personnel; Practice on receiving	

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
		primary professional skills and experience professional activity: procedural assistant nurse; Surgical practice profile: medical assistant surgeon; Obstetrics and gynecology practice: gynecologist assistant;	
PC-6	Capable of maintaining medical records and organizing the activities of nursing staff at their disposal	Organization of special care for the sick; Faculty Therapy; Faculty of Surgery; Public health and healthcare, economics healthcare; Medical rehabilitation; Neurology, medical genetics, neurosurgery; Surgical practice profile: medical assistant surgeon;	

* 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 is "Hospital Surgery, Pediatric Surgery" is 10 credits (360 academic hours).

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

Type of academic activities	Total academic hours	Semesters/training modules			
		9	10	11	12
<i>Classroom learning</i>	263	85	80	34	64
including:					
Lectures (LC)	-	-	-	-	-
Lab work (LW)	263	85	80	34	64
Seminars(S)	-	-	-	-	-
<i>Self-study, academic hours</i>	61	17	10	29	5
<i>Evaluation and assessment (exam or pass/fail grading)</i>	36	6	18	9	3

Type of academic activities		Total academic hours	Semesters/training modules			
			9	10	11	12
Course workload	ac.h.	360	108	108	72	72
	credits	10	3	3	2	2

5. COURSE CONTENTS

Table 5.1. Course contents and academic activities types

Course module title	Course module contents (topics)	Academic activities types
Section 1 Cardiovascular Surgery	<p>Topic 1.1. Anatomy of the cardiovascular system. General issues of diagnosis and treatment of heart and vascular diseases. Anatomical and physiological information about the cardiovascular system. History of cardiovascular surgery. Semiotics and classification of cardiovascular diseases. General diagnostic issues of heart and vascular diseases. Functional diagnostic methods for heart and vascular diseases. Radioisotope diagnostic methods for heart and vascular diseases. X-ray and magnetic resonance imaging diagnostic methods for heart and vascular diseases. Endovascular diagnostic methods. Surgical treatment methods for vascular diseases. Surgical approaches. Vascular suture. Arterial surgery. Vascular microsurgery. Vascular prostheses. Basic principles of cardiac surgery. Prostheses of heart valves and the ascending aorta.</p>	LW
	<p>Topic 1.2. Congenital vascular defects. Traumatic vascular injuries. Congenital malformations of arterial vessels. Malformations of peripheral veins. Vascular injuries (arterial wounds, damage to main veins). Classification. Clinical presentation. Physical examination methods. Angiography. Indications and contraindications for surgery. Principles of surgical treatment. Immediate and long-term results. Rehabilitation. Vascular injuries. Prevention of secondary bleeding. Indications for surgery. Types of arterial surgeries. Surgical results. Types of venous surgeries. Surgical results.</p>	LW
	<p>Topic 1.3. Acute arterial thrombosis and embolism. Arterial thrombosis and embolism: basic concepts, causes, pathogenesis, differential diagnosis, main treatment methods. Classification of acute ischemia by degree.</p>	LW
	<p>Topic 1.4. Aneurysms of the aorta and arteries. Definition of aneurysms, classification of aneurysms by type, etiology, and wall structure. Thoracic aortic aneurysms (ascending aorta, aortic arch, descending thoracic aorta).</p>	LW

Course module title	Course module contents (topics)	Academic activities types
	<p>Abdominal aortic aneurysms. Thoracoabdominal aneurysms. Dissecting aortic aneurysms. Peripheral artery aneurysms. Main surgical treatment methods for aneurysms.</p> <p>Surgical tactics, most common complications, and their prevention.</p>	
	<p>Topic 1.5. Stenosing diseases of the branches of the aorta. Main causes of chronic obliterating diseases, prevalence, risk factors, pathogenesis, differential diagnosis, and basic treatment principles. Atypical coarctation of the aorta. Chronic ischemia of the brain and upper extremities (Takayasu syndrome). Compression syndrome of the neurovascular bundle at its exit from the chest (scalenus syndrome, costoclavicular syndrome, hyperabduction syndrome). Chronic ischemia of the lower extremities. Stages of ischemia (Pokrovsky-Fontaine). Leriche syndrome. Vasorenal hypertension. Chronic ischemia of the digestive organs (angina abdominalis).</p>	<p>LW</p>
	<p>Topic 1.6. Varicose veins of the lower extremities. Anatomical structure of the venous system of the lower extremities. Varicose veins of the lower extremities. Diagnostic methods: assessment of the valve apparatus and communicating veins, functional tests, instrumental diagnostics. Differential diagnosis. Non-surgical treatment methods: drug therapy, compression therapy, sclerotherapy. Modern surgical treatment methods. Indications, complications, postoperative management. Causes of postoperative recurrence.</p>	<p>LW</p>
	<p>Topic 1.7. Thrombophlebitis and phlebothrombosis. Pulmonary embolism. Definition of thrombophlebitis and phlebothrombosis. Thrombosis in the inferior vena cava system. Acute thrombophlebitis of the superficial and deep veins of the lower extremities. Deep vein thrombosis of the lower extremities. Thrombosis of the inferior vena cava. Complications: white painful phlegmasia, venous gangrene (Gregoire's disease). Differential diagnosis. Thrombosis in the superior vena cava system. Thrombosis of the saphenous veins of the upper extremities. Subclavian vein thrombosis (Paget-Schroetter syndrome). Pulmonary embolism. Anticoagulant and thrombolytic therapy, indications and contraindications, medications, doses, routes of administration. Prevention methods, indications and contraindications for vena cava filter implantation.</p>	<p>LW</p>
	<p>Topic 1.8. Chronic venous insufficiency. Post-thrombophlebitic syndrome. Post-thrombophlebitic syndrome. Classification</p>	<p>LW</p>

Course module title	Course module contents (topics)	Academic activities types
	(varicose, edematous, painful, ulcerative forms). Chronic venous insufficiency. Etiology and pathogenesis. Classification. Clinical presentation. Diagnosis, functional tests. Phlebography. Indications for surgery. Contraindications to surgery. Surgical treatment methods. Methods of extra- and intravascular valve correction in the venous system. Principles of postoperative management. Immediate and long-term results. Rehabilitation. Indications for conservative treatment. Principles of conservative therapy. Results of conservative treatment. Rehabilitation. Complications of CVI: trophic ulcers	
	Topic 1.9. Diseases of the lymphatic system. Anatomy of the lymphatic vessels of the extremities. Diseases of the lymphatic vessels of the extremities. Chronic lymphatic insufficiency: lymphedema (lymphostasis, elephantiasis). Etiology, pathogenesis, clinical presentation, diagnosis, and results of various types of surgical and therapeutic treatment. Chylothorax, chylopericardium, chyloperitoneum. Indications for drainage of the thoracic lymphatic duct.	LW
	Topic 1.10. Endovascular methods for the treatment of diseases of the heart and blood vessels. Endovascular surgery. Principles, advantages and disadvantages.	LW
	Topic 1.11. Congenital heart defects. Congenital heart defects: classification of congenital defects and pulmonary hypertension. "Pale" defects: patent ductus arteriosus, atrial septal defect, isolated pulmonary artery stenosis, ventricular septal defect, congenital stenosis of the aortic orifice. "Blue" defects: Fallot's defects, transposition of the great vessels, Ebstein's anomaly. Etiology, pathogenesis, pathomorphology, clinical presentation, diagnosis, indications for surgery, treatment. Emergency surgical interventions for congenital heart defects.	LW
	Topic 1.12. Acquired heart defects. Main causes of acquired heart defects, prevalence, hemodynamics, clinical presentation, diagnosis, treatment strategies. Mitral stenosis and mitral regurgitation. Aortic stenosis, aortic valve insufficiency. Tricuspid valve defects. Mitral-aortic, mitral-tricuspid, mitral-aortic-tricuspid valve defects. Combination of heart valve disease with ischemic heart disease.	LW
	Topic 1.13. Ischemic heart disease and its complications. Prevalence. Anatomical and physiological characteristics of coronary circulation. Etiology of coronary heart disease. Clinical features and diagnosis of coronary heart disease. Classification of coronary heart disease. Angina pectoris.	LW

Course module title	Course module contents (topics)	Academic activities types
	Myocardial infarction. Non-invasive diagnostics. Coronary angiography. Left ventriculography. Assessment of left ventricular function. Surgical treatment of coronary heart disease. Indications and contraindications. Errors, dangers, and complications during the surgical period. Management of the uncomplicated postoperative period. Immediate and long-term results.	
	<p>Topic 1.14. Pathology of the conduction system of the heart.</p> <p>Bradyarrhythmic forms of rhythm and conduction disorders.</p> <p>Clinical types of bradyarrhythmias: sick sinus syndrome, sinoatrial block, atrioventricular block, and other forms of bradyarrhythmias. Etiology and pathogenesis. Clinical presentation and diagnosis. Drug treatment. Indications for surgery. Surgical treatment: temporary pacing, permanent endocardial pacing (EPC). Classification of pacing types. Complications of pacing. Treatment outcomes and prognosis. Tachyarrhythmias. Etiology and pathogenesis. Clinical presentation and diagnosis. Drug treatment. Indications for surgery. Electrophysiological study. Surgical treatment: RFA. Complications of RFA. Results, prognosis, and rehabilitation of patients.</p>	LW
	<p>Topic 1.15. Pathology of the pericardium.</p> <p>Classification of pericarditis, etiopathogenesis, and diagnostic methods. Fibrinous pericarditis. Exudative pericarditis. Constrictive pericarditis, "armored" heart. Hemodynamic disturbances, differential diagnosis. Indications for surgery, surgical methods. Cardiac tamponade. Pericardial cysts and tumors.</p>	LW
	<p>Topic 1.16. Pathology of the myocardium.</p> <p>Myocarditis. Cardiomyopathy. Classification, definition, clinical features, diagnosis, treatment. Modern surgical treatment methods for cardiomyopathy. History of the development of transplantology, the current state of organ donation. Principles and techniques of performing heart transplantation. Indications for heart transplantation, possible complications, their prevention, postoperative follow-up, and rehabilitation of patients.</p>	LW
	<p>Topic 1.17. Tumors of the heart.</p> <p>Etiology, pathology, and classification of cardiac tumors. Clinical presentation and diagnostic methods. Benign cardiac tumors. Malignant cardiac tumors (angiosarcoma, fibrosarcoma, rhabdomyosarcoma). Surgical approaches for cardiac tumors.</p>	LW
Section 2 Pediatric Surgery	<p>Topic 2.1. Pediatric surgery: goals and objectives, development history.</p> <p>Pediatric surgery: goals and objectives, development history. Syndromology. General embryology and</p>	LW

Course module title	Course module contents (topics)	Academic activities types
	teratology. Pediatric surgeon's work. Intensive care and resuscitation in children.	
	Topic 2.2. Anatomical and physiological characteristics of the child's body. Anatomical and physiological characteristics of the child's body. Fundamental differences in pediatric surgery. Specific aspects of examination of young children and newborns.	LW
	Topic 2.3. Features of purulent surgical infection in children. Etiology and pathogenesis of surgical infections in children. Principles of diagnosis and treatment of purulent surgical infections in children. Purulent inflammatory diseases of lymphoid tissue (lymphadenitis). Sepsis. Detoxification methods for patients with purulent surgical infections.	LW
	Topic 2.4. Purulent-inflammatory diseases of soft tissues. Purulent inflammatory diseases: furuncle, carbuncle, abscess, phlegmon, felon, lymphadenitis. Classification, etiology, pathogenesis, clinical presentation, diagnosis, and treatment.	LW
	Topic 2.5. Acute hematogenous osteomyelitis in children. Chronic osteomyelitis. Etiopathogenesis. Clinical presentation, diagnosis, and surgical treatment. Metaphyseal osteomyelitis.	LW
	Topic 2.6. Acute purulent destructive pneumonia in children. Clinical presentation of disease forms, classification, diagnosis, treatment.	LW
	Topic 2.7. Surgical pathology of the lungs in children: congenital lung malformations, bronchiectasis, foreign bodies in the trachea and bronchi. Embryology of pulmonary malformations. Agenesis and aplasia of the lung. Pulmonary hypoplasia. Congenital localized emphysema. Congenital solitary cyst. Pulmonary sequestration. Pulmonary arteriovenous fistulas. Bronchiectasis. Etiology and pathogenesis. Clinical presentation and diagnosis. Complaints. Physical examination. Bronchoscopy. X-ray diagnostics. Radioisotope study. Differential diagnosis. Treatment. Follow-up care. Foreign bodies in the trachea and bronchi.	LW
	Topic 2.8. Acute appendicitis in children. General information. Classification. Etiology and pathogenesis. Clinical presentation and diagnosis. Clinical presentation of acute appendicitis in older children. Diagnosis of acute appendicitis in older children. Clinical presentation and diagnosis of acute appendicitis in young children. Differential diagnosis. Differential diagnosis of acute appendicitis in older children. Differential diagnosis	LW

Course module title	Course module contents (topics)	Academic activities types
	of acute appendicitis in young children. Treatment. Prognosis. Appendicitis in newborns.	
	Topic 2.9. Peritonitis of newborns and infants. Primary pelvic peritonitis in girls. Appendicular peritonitis. Peritonitis in newborns. Necrotizing enterocolitis.	LW
	Topic 2.10. Acute intestinal obstruction in children (congenital and acquired). Semiotics and diagnosis of congenital intestinal obstruction. Vomiting. Evaluation of rectal contents. Abdominal examination. Additional examination methods. Duodenal atresia. Duodenal stenosis. Congenital midgut volvulus. Ladd's syndrome. Small intestinal atresia. Duplications of the digestive tract (enterocystomas). Meconium ileus. Palpable abdominal and retroperitoneal tumor syndrome. Acute adhesive intestinal obstruction. Intussusception. Dynamic intestinal obstruction. Obstructive intestinal obstruction.	LW
	Topic 2.11. Esophageal atresia, diaphragmatic hernia, pyloric stenosis, anal atresia. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Differential diagnosis. Treatment. Modern surgical techniques, principles of surgical treatment. Optimal timing of surgical correction. Prognosis. Interdisciplinary collaboration.	LW
	Topic 2.12. Inguinal hernia and hydrocele, varicocele, phimosis, cryptorchidism in children. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Differential diagnosis. Treatment. Modern surgical techniques, principles of surgical treatment. Optimal timing of surgical correction. Prognosis. Interdisciplinary collaboration.	LW
	Topic 2.13. Pediatric traumatology, including skeletal, chest, and abdominal trauma, and traumatic brain injury. Chest organ injury. Abdominal organ injury. Tubular and flat bone injury. Nerve and vascular injury. Traumatic brain injury.	LW
Section 3 Abdominal Surgery	Topic 3.1. Acute appendicitis Classification, clinical presentation, diagnosis, differential diagnosis, treatment strategies, postoperative complications and their causes. Clinical and diagnostic features of atypical appendiceal locations: retrocecal, pelvic, subhepatic, and left-sided. Acute appendicitis in the elderly. Acute appendicitis in pregnant women. Modern diagnostic and surgical treatment methods (laparoscopic appendectomy). Complicated forms of acute appendicitis (appendiceal infiltrate, appendiceal abscess), clinical presentation, differential diagnosis, and treatment strategies.	LW
	Topic 3.2. Acute cholecystitis.	LW

Course module title	Course module contents (topics)	Academic activities types
	Classification, clinical presentation, diagnosis, differential diagnosis, conservative treatment, surgical treatment methods (indications for cholecystectomy through a minilaparoscopic approach and for laparoscopic cholecystectomy).	
	Topic 3.3. Diseases of the pancreas. Classification, clinical presentation, diagnosis, and treatment: conservative and surgical. Complications of pancreatitis: early (shock, enzymatic peritonitis, acute liver failure, vascular thrombosis, jaundice, toxic psychosis) and late (abscesses of the pancreas and abdominal cavity, retroperitoneal phlegmon, postnecrotic cysts of the pancreas, erosive and gastrointestinal bleeding). Chronic pancreatitis. Classification, clinical presentation, conservative and surgical treatment.	LW
	Topic 3.4. Intestinal diseases. Ulcerative colitis. Clinical presentation, diagnosis, indications for surgical treatment. Crohn's disease. Clinical presentation, diagnosis, indications for surgical treatment. Complications. Intestinal bleeding, etiology, diagnosis, treatment strategy.	LW
	Topic 3.5. Liver diseases. Liver trauma: classification, diagnosis, and treatment principles. Cysts, abscesses, and tumors. Differential diagnosis. Treatment considerations. Echinococcosis and alveolar echinococcosis. Etiology and epidemiology. Clinical presentation. Differential diagnosis. Diagnosis. Treatment.	LW
	Topic 3.6. Acute intestinal obstruction. Definition of the disease. Classification of intestinal obstruction. Pathogenesis. Clinical presentation. Diagnostic features of various types of intestinal obstruction. Differential diagnosis. Treatment approaches (indications for surgery, principles of surgical treatment, nasointestinal intubation, intestinal lavage, types of surgical interventions). Acute adhesive intestinal obstruction. Treatment approaches.	LW
	Topic 3.7. Diseases of the stomach and duodenum. Complications of peptic ulcer disease: bleeding, perforation, penetration, pyloroduodenal stenosis, malignancy. Ulcerative gastrointestinal bleeding. Clinical presentation, differential diagnosis, and treatment. Forrest's endoscopic classification. Upper gastrointestinal bleeding: etiology, diagnosis, and treatment. Modern treatment methods and main types of surgical interventions for complicated peptic ulcer disease. Atypical forms of perforated gastric and	LW

Course module title	Course module contents (topics)	Academic activities types
	duodenal ulcers, clinical symptoms, and diagnostic features.	
	Topic 3.8. Peritonitis. Definition, classification, etiology, diagnosis, principles of surgical treatment. Complications of surgical treatment. Compartment syndrome, diagnosis, prevention and treatment methods.	LW
	Topic 3.9. Diseases of the extrahepatic bile ducts. Complications of gallstone disease. Choledocholithiasis. Mechanical jaundice. Cholangitis. Liver abscess. Liver failure. Mechanical jaundice syndrome, clinical presentation, causes. Diagnostic methods for the causes of mechanical jaundice: laboratory tests, special research methods (ERCP, PTC, ultrasound, radiographic methods, CT, laparoscopy, etc.). Surgical treatment methods for the causes of mechanical jaundice.	LW
	Topic 3.10. Diseases of the operated stomach. Dumping syndrome. Symptoms, diagnosis, and principles of surgical treatment. Hypoglycemic syndrome. Symptoms, diagnosis, and principles of surgical treatment. Peptic ulcer of the gastrojejunostomy. Symptoms, diagnosis, and principles of surgical treatment. Afferent loop syndrome. Symptoms, diagnosis, and principles of surgical treatment. Unhealed or recurrent ulcers after vagotomy. Symptoms, diagnosis, and principles of surgical treatment. Postresection anemia. Symptoms, diagnosis, and treatment tactics. Alkaline reflux gastritis and reflux esophagitis. Symptoms, diagnosis, and principles of surgical treatment.	LW
Section 4 Thoracic Surgery	Topic 4.1. Chest organ injuries, pleural empyema. Open and closed chest trauma. Pneumothorax (open, closed, valvular, tension), hemothorax, hemopneumothorax, hydrothorax, chylothorax, pyopneumothorax). Etiology, pathogenesis, diagnosis, first aid principles, and treatment. Traumatic tracheal injuries. Diagnosis and treatment methods. Esophageal injuries. Diagnosis and treatment methods. Pleural empyema. Etiology, diagnosis, and surgical treatment methods.	LW
	Topic 4.2. Diaphragmatic hernias, reflux esophagitis. Anatomical and physiological information about the esophagus and diaphragm. Classification of diaphragmatic hernias. Obturator and valvular functions of the cardia. Reflux esophagitis: classification, diagnosis, principles of surgical treatment, and indications for surgical intervention.	LW
	Topic 4.3. Esophageal cancer, cysts and diverticula of the esophagus. Benign tumors of the esophagus. Clinical presentation, diagnosis, treatment strategy. Esophageal cancer, TNM classification, clinical presentation, diagnosis, differential	LW

Course module title	Course module contents (topics)	Academic activities types
	diagnosis, treatment. Surgical treatment of esophageal cancer: radical and palliative. Esophageal cysts, clinical presentation, diagnosis, treatment strategy. Differential diagnosis with esophageal tumors. Esophageal diverticula. Classification, clinical presentation, diagnosis, treatment strategy.	
	Topic 4.4. Burns and cicatricial strictures of the esophagus. Esophageal burns: classification and diagnostic features. Treatment of esophageal burns. Burn-induced esophageal strictures: classification, diagnosis, and differential diagnosis. Treatment of patients with burn-induced esophageal strictures.	LW
	Topic 4.5. Neuromuscular diseases of the esophagus. Cardiospasm. Clinical presentation and diagnosis. Achalasia of the cardia. Clinical presentation and diagnosis. Barsony-Teschendorf syndrome. Clinical presentation and diagnosis. Differential diagnosis of neuromuscular diseases of the esophagus. Treatment tactics.	LW

6. COURSE EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Tab. 6.1. Course equipment and technology support requirements

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
Lab-work	A classroom for laboratory work, individual consultations, ongoing assessments, and midterm assessments, equipped with specialized furniture and equipment.	A set of specialized furniture; technical equipment: multimedia projector, laptop, set of models, set of educational videos and presentations, set of analog and digital X-rays, tomograms, sonograms, educational posters and tables.
Self-studies	Classroom for self-study of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to the Electronic Information Educational Environment.	
A classroom at the department's clinical site for laboratory and clinical classes	A classroom for laboratory work and clinical sessions, individual consultations, ongoing monitoring, and midterm assessments, equipped with specialized furniture and equipment.	Laboratory, diagnostic, and therapeutic equipment for the department's clinical facilities

7. RESOURCES RECOMMENDED FOR COURSE STUDY

a) Main readings:

1. History of Evolution and Milestones of Thoracic Surgery = История становления и развития торакальной хирургии : учебное пособие / P.I. Manzhos, A.A. Imanalieva, G.I. Veretnik [et al.]. - Электронные текстовые данные. - Moscow : PFUR, 2025. - 150 p. : ил. - Книга на английском языке. URL: https://mega.rudn.ru/MegaPro/UserEntry?Action=Link_FindDoc&id=518834&idb=0b
2. Qualification Tests for Pediatric Surgery = Квалификационные тесты по хирургии детского возраста : training manual / M.R.H. Vachoo, P.I. Manzhos, A.A. Imanalieva [et al.]. - Электронные текстовые данные. - Москва : РУДН, 2022. - 225 с. - Книга на английском языке. URL: https://mega.rudn.ru/MegaPro/UserEntry?Action=Link_FindDoc&id=505335&idb=0
3. Cardiomyopathies and Myocarditis = Кардиомиопатии и миокардиты : educational and Methodical Manual / А. Г. Файбушевич, Г. И. Веретник, В. Ю. Баранович [и др.]. - Книга на английском языке; электронные текстовые данные. - М. : PFUR, 2020. – 65 p. : ил. URL: https://mega.rudn.ru/MegaPro/UserEntry?Action=Link_FindDoc&id=485575&idb=0
4. Surgical Treatment of Bradyarrhythmias = Хирургическое лечение брадиаритмий : tutorial / V.Y. Varanovich, A.G. Faibushevich, M.R.H. Vachoo [et al.]. - Книга на английском языке; электронные текстовые данные. - Moscow : PFUR, 2019. - 234 p. : ил. URL: https://mega.rudn.ru/MegaPro/UserEntry?Action=Link_FindDoc&id=484279&idb=0

Additional readings:

1. Основы ухода за хирургическими больными = Basics of care for surgical patients : учебное пособие / А.И. Бадретдинова, Л.Г. Ахуба, Н.Г. Косцова [и др.]. - Книга на русском и английском языках; Электронные текстовые данные. - Москва : РУДН, 2020. - 292 с. : ил. URL: https://mega.rudn.ru/MegaPro/UserEntry?Action=Link_FindDoc&id=484582&idb=0

Internet-(based) sources:

1. Electronic libraries (EL) of RUDN University and other institutions, to which university students have access on the basis of concluded agreements:

- RUDN Electronic Library System (RUDN ELS) <http://lib.rudn.ru/MegaPro/Web>
- EL «University Library Online" <http://www.biblioclub.ru>
- EL "Yurayt" <http://www.biblio-online.ru>
- EL "Student Consultant" www.studentlibrary.ru
- EL "Znanium" <https://znanium.ru/>

2. Databases and search engines:

- Sage <https://journals.sagepub.com/>
- Springer Nature Link <https://link.springer.com/>
- Wiley Journal Database <https://onlinelibrary.wiley.com/>
- Lens.org <https://www.lens.org>

The training toolkit and guidelines for a student to do a course:*

1. The course of lectures on the discipline "Hospital Surgery, Pediatric Surgery"

*All educational and methodological materials for independent work of students are posted in accordance with the current procedure on the discipline page in the university telecommunication training and information system.

DEVELOPERS:

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Hospital Surgery with the
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