MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational Institution
«BELARUSIAN STATE MEDICAL UNIVERSITY»

Контрольный экземпляр

APPROVED
by Rector of the Educational Institution «Belarusian State Medical University»
_____S.P.Rubnikovich
_____25.06.2026
Reg. # UD-0911-01-71/2627/edu.

SURGICAL DISEASES

Curriculum of the educational institution in the academic discipline for the specialty

7-07-0911-01 «General Medicine»

2026

Curriculum is based on the educational program «Surgical Diseases», approved 25.06.2026, registration # УД-0911-01-71/2627/уч; on the educational plan in the specialty 7-07-0911-01 «General Medicine», approved 15.04.2026, registration # № 7-07-0911-01/2627/mf.

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RECOMMENDED FOR APPROVAL:

by the Department of Surgical Diseases of the Educational Institution «Belarusian State Medical University»
(protocol #14 of 30.04.2026);

Scientific and Methodological Council of the Educational Institution «Belarusian State Medical University»
(protocol # 10 of 25.06.2026).

EXPLANATORY NOTE

«Surgical Diseases» is an academic discipline of the Surgical Module 3, which contains systemized scientific knowledge and techniques in the field of etiology, pathogenesis, clinical manifestations, diagnostics, differential diagnosis, treatment and prevention of the diseases that require surgical correction.

The aim of the academic discipline «Surgical Diseases» is the formation of specialized competence for providing medical care to patients with surgical diseases.

The objectives of the academic discipline «Surgical Diseases» are to develop in students' scientific knowledge about the etiology, pathogenesis, clinical manifestations, methods of diagnosis and treatment of surgical diseases, skills and abilities necessary for:

examination of patients with surgical diseases;

interpretation of the results of laboratory and instrumental research methods;

diagnosis and treatment of surgical diseases;

medical prevention of surgical diseases;

medical examination, medical rehabilitation of patients with surgical diseases;

ensuring epidemiological safety when providing medical care.

Relations to other academic disciplines

The knowledge, abilities and skills acquired in the study of the academic discipline «Surgical Diseases» are necessary for the successful study of the following academic disciplines: «Oncology», «Traumatology and Orthopedics», «Urology», module «Surgery» of the Sub-Residensy.

Studying the academic discipline «Surgical Diseases» should ensure the formation of students' specialized competence: diagnose and provide primary and specialized medical care for surgical and urological diseases and the most common malignancies.

As a result of studying the academic discipline «Surgical Diseases», the student should

know:

etiology, classification, pathogenesis, clinical picture, diagnosis and differential diagnosis, methods of prevention and treatment of the most common surgical diseases and injuries in adult patients;

algorithms (standards) for examination and provision of medical care to patients with surgical diseases;

therapeutic tactics in the development of critical conditions in patients with surgical diseases;

rules of medical ethics and deontology;

be able to:

apply communication skills with the patient based on an assessment of his mental and personal characteristics, individual reaction to the disease;

conduct preventive examinations and clinical monitoring of the adult population;

conduct a physical examination of the patient (questioning, inspection, percussion, palpation, auscultation);

determine indications for additional diagnostic methods and carry out clinical interpretation of the data obtained;

carry out differential diagnosis of diseases, use consultations with medical specialists when establishing a final clinical diagnosis;

formulate a diagnosis of major surgical diseases;

prepare medical documentation;

provide emergency and urgent medical care for shock, acute surgical abdominal diseases and processes, trauma to the chest and abdominal organs, various burns, frostbite, bleeding;

organize transportation of patients to specialized healthcare organizations and provide medical support;

manage psychological and personal mechanisms in the process of treating patients with concomitant neuropsychic and somatic diseases;

master:

methods of collecting anamnesis, examination and physical examination of patients with suspected surgical disease;

methods for identifying symptoms of surgical diseases;

technique of applying and removing skin sutures;

a technique for temporarily stopping bleeding;

method of performing digital rectal examination.

Total number of hours for the study of the discipline is 338 academic hours, of which 210 classroom hours and 128 hours of student independent work. Classroom hours according to the types of studies: lectures – 39 hours (including 12 hours of supervised student independent work (SSIW)), practical classes – 171 hours.

Form of higher education – full-time.

Intermediate assessment is carried out according to the syllabus of the specialty in the form of an examination (8th, 10th semesters).

ALLOCATION OF ACADEMIC TIME ACCORDING TO SEMESTERS OF STUDY

Code, name of the specialty	semester	Number of classroom hours					Out-of-class self-studies	Form of interim assessment
		total	in-class	including				
				class lectures	SSIW	practicals		
7-07-0911-01 «General Medicine»	7	108	69	12	3	54	39	-
	8	92	51	9	6	36	41	examination
	9	64	42	3	3	36	22	-
	10	74	48	3	-	45	26	examination
Total hours		**338**	**210**	**27**	**12**	**171**	**128**	

THEMATIC PLAN

Section (topic) name	Number of class hours	
	lectures (incl. SSIW)	practical
1. Current Issues in Surgery. Deontology in Surgery	**-**	**1**
2. Abdominal Surgery	**22,5**	**89**
2.1. Acute and Chronic Appendicitis. Complications of the Acute Appendicitis	1,5	5
2.2. Hernias	3	6
2.3. Acute Pancreatitis	1,5	6
2.4. Complications of the Acute Pancreatitis. Chronic Pancreatitis	-	6
2.5. Diseases of the Liver. Surgical treatment of Parasitic Diseases	1,5	6
2.6. Diseases of the Bile Ducts	1,5	6
2.7. Postcholecystectomy Syndrome. Cholestasis Syndrome	1,5	6
2.8. Intestinal Obstruction	1,5	6
2.9. Complications of the Gastroduodenal Ulcers	1,5	6
2.10.Gastroduodenal Bleeding		6
2.11.Peritonitis	3	6
2.12.Blunt Abdominal Trauma	1,5	6
2.13.Portal Hypertension Syndrome	3	6
2.14.Diseases of the Small Intestine. Diseases of the Large Intestine. Diseases of the Rectum	1,5	6
2.15.Diseases of the Spleen. Diseases of the Diaphragm	-	6
3. Surgery of Heart and Blood Vessels	**9**	**30**
3.1. Diseases of the Heart	3	6
3.2. Diseases of the Aorta. Surgery of the Lymphatic System	-	6
3.3. Diseases of the Arteries. Acute Arterial Obstruction	3	6
3.4. Venous Diseases of Extremities	3	6
3.5. Deep Vein Thrombosis. Post-thrombotic disease	-	6
4. Chest Surgery	**4,5**	**23**
4.1. Diseases of the Lungs and Pleura	1,5	6
4.2. Diseases of the Mediastinum	-	5
4.3. Diseases and Trauma of the Esophagus	1,5	6
4.4. Blunt Chest Trauma	1,5	6
5. Transplantation of Organs and Tissues	**1,5**	**6**
6. Surgical Diseases of the Endocrine Glands	**1,5**	**11**
6.1. Diabetes Mellitus in Surgery	1,5	6
6.2. Diseases of the Thyroid and Parathyroid Glands	-	5
7. Surgical Diseases of the Breast	**-**	**5**
8. Performing practical skills on simulation equipment	**-**	**6**
Total hours	**39**	**171**

CONTENT OF THE ACADEMIC MATERIAL

1. Current Issues in Surgery. Deontology in Surgery

History of the development of surgery in Belarus. Current issues and directions for the development of surgery. Medical ethics and deontology in surgery. Relationships in the «doctor-patient» system. Medical and ethical features of professional communication between doctors and patients at various stages of medical care. Current medical terminology.

2. Abdominal Surgery

2.1. Acute and Chronic Appendicitis. Complications of the Acute Appendicitis

Anatomy and physiology of the caecum and appendix. Classification of acute. Etiology and pathogenesis of acute appendicitis. Clinical picture of acute and chronic appendicitis. Clinical symptoms of acute appendicitis in case of common localization. Clinical features of abnormal appendix localization. Clinical features of acute appendicitis in children, aged people, pregnant women. Clinical manifestations of chronic appendicitis. Principles of diagnostics of acute and chronic appendicitis, treatment, types of operations. Difficulties and mistakes in treatment. Postoperative management. Classification of acute appendicitis complications. Clinical manifestations, laboratory and instrumental diagnostics. Diagnostic and treatment difficulties. Periappendiceal mass. Appendiceal abscess. Peritonitis due to the acute appendicitis: types, treatment plan. Wound infection. Differential diagnosis of acute appendicitis complications. Complications of other organs and systems. Treatment principles of acute appendicitis complications.

Management of patients with appendicitis: collection of complications and anamnesis; objective examination of a patient; planning of patient’s investigations; interpretation of laboratory and diagnostic findings; making a diagnosis; indications for surgery; making a plan of surgery; assistance in appendectomy; postoperative care. Writing an educational medical card for an inpatient patient.

2.2. Hernias

Definition of concepts in herniology. Classification of hernias by origin, localization, course. Etiopathogenesis of hernias (predisposing and producing factors). General symptomatology of hernias, diagnosis and surgical treatment.

Complications of hernias: classification, clinical picture, diagnosis, differential diagnosis, treatment. Strangulated hernia. Hernia inflammation. Coprostasis. Hernias of the white line of the abdomen: anatomical data, clinical picture, diagnosis, treatment methods. Umbilical hernias: anatomical data, classification, clinical picture, diagnosis, differential diagnosis, treatment. Inguinal hernias: anatomical data, classification, clinical picture, diagnosis, differential diagnosis, treatment. Femoral hernias: anatomical data, clinical picture, diagnosis, differential diagnosis, treatment.

Rare forms of hernias. The concept of recurrent hernias. Postoperative hernias: clinical picture, diagnosis, treatment. The choice of surgical intervention technique for hernias. Tension and non-tension hernioplasty techniques.

Supervision of patients with hernias: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan;

interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; assisting during hernia repair; postoperative patient management.

2.3. Acute Pancreatitis

Anatomical and physiological information about the pancreas. Topographic anatomy of the pancreas. Classification of acute pancreatitis. Etiopathogenesis of acute pancreatitis. Clinical picture of acute pacreatitis. Laboratory and instrumental diagnosis of acute pancreatitis. Assessing the severity of acute pancreatitis. Differential diagnosis of acute pancreatitis. Treatment tactics for acute pancreatitis: conservative treatment, indications for surgical treatment, types of surgical interventions.

Supervision of patients with acute pancreatitis: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; assisting during cholecystectomy; postoperative patient management.

2.4. Complications of the Acute Pancreatitis. Chronic Pancreatitis

Complications of acute pancreatitis: clinical picture, diagnosis, differential diagnosis, treatment options. Difficulties and errors in diagnosis and treatment of complications of acute pancreatitis. Possibilities of using modern minimally invasive technologies in the diagnosis and treatment of patients with acute pancreatitis and its complications.

Classification of chronic pancreatitis. Etiopathogenesis of chronic pancreatitis. The clinical picture of the disease depending on the form. Laboratory and instrumental diagnostics, differential diagnosis of chronic pancreatitis. Treatment of chronic pancreatitis: conservative therapy, indications for surgical treatment, types of operations. Complications of chronic pancreatitis: clinical picture, diagnosis, treatment.

Supervision of patients with complications of acute pancreatitis and chronic pancreatitis: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

2.5. Diseases of the Liver. Surgical treatment of Parasitic Diseases

Anatomical and physiological information about the liver. Special methods for examining patients with liver diseases. Non-parasitic liver cysts: etiopathogenesis, clinical picture, diagnosis, treatment. Liver abscesses: etiopathogenesis, clinical picture, diagnosis, treatment. Differential diagnosis of focal liver diseases. Difficulties and errors in diagnosing and treating liver diseases. Possibilities of using modern minimally invasive technologies in the diagnosis and treatment of patients with focal liver diseases.

Amebiasis: clinical picture, diagnosis, treatment, indications for surgical treatment.

Echinococcosis: clinical picture, diagnosis, treatment, indications for surgical treatment, types of operations.

Alveococcosis: clinical picture, diagnosis, treatment, indications for surgical treatment, types of operations.

Opisthorchiasis: clinical picture, diagnosis, treatment, indications for surgical treatment, types of operations.

Ascariasis: clinical picture, diagnosis, treatment, indications for surgical treatment, types of operations.

Supervision of patients with liver diseases and parasitic diseases: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative management of the patient.

2.6. Diseases of the Bile Ducts

Anatomical and physiological information about the gallbladder and bile ducts. Classification of diseases of the gallbladder and bile ducts. Methods for examining patients with diseases of the gallbladder and bile ducts.

Cholelithiasis. Acute and chronic cholecystitis: classification, etiopathogenesis, clinical picture, diagnosis, differential diagnosis, treatment methods, types of operations.

Complications of cholelithiasis: clinical picture, diagnosis, differential diagnosis, treatment. Possibilities of using modern minimally invasive technologies in the diagnosis and treatment of patients with biliary pathology. Differential diagnosis of acute cholecystitis.

Choledocholithiasis: causes, clinical manifestations, laboratory and instrumental diagnostics, treatment.

Stenosis of the major duodenal papilla: causes, clinical manifestations, laboratory and instrumental diagnostics, treatment.

Cholangitis: causes, clinical manifestations, laboratory and instrumental diagnostics, treatment.

Mirizzi syndrome: causes, clinical manifestations, laboratory and instrumental diagnostics, treatment.

Biliary fistulas and cholelithiasis: causes, clinical manifestations, laboratory and instrumental diagnostics, treatment.

Benign tumors of the gallbladder: classification, clinical picture, diagnosis, treatment.

Supervision of patients with biliary tract diseases: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; assisting during cholecystectomy; drawing up a plan for surgical intervention; postoperative patient management.

2.7. Postcholecystectomy Syndrome. Cholestasis Syndrome

Postcholecystectomy syndrome: definition of the concept, classification, clinical picture, diagnosis, differential diagnosis, treatment.

Damage to the bile ducts: classification, causes, clinical picture, diagnosis, treatment.

Cholestasis syndrome: definition of the concept, classification, enzyme hepatogram, clinical picture, modern diagnostic capabilities, differential diagnosis of obstructive jaundice, indications for surgical treatment, types and features of surgical interventions, features of pre- and postoperative management.

Supervision of patients with postcholecystectomy syndrome and cholestasis syndrome: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

2.8. Intestinal Obstruction

Intestinal obstruction: definition of the concept, classification (by level of obstruction, by morphofunctional nature, by stages), etiology, pathogenesis. Features of etiopathogenesis in colonic obstruction. Methods for examining patients with intestinal obstruction. Clinical picture, diagnosis, differential diagnosis of intestinal obstruction syndrome.

Therapeutic and diagnostic complex: concept, content, evaluation of results. Principles of differentiated diagnosis and treatment of acute intestinal obstruction. Indications for surgical treatment of obstruction, preoperative preparation, features of the postoperative period, types and objectives of surgical treatment. Prevention of intestinal obstruction.

Supervision of patients with intestinal obstruction: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

2.9. Complications of Gastroduodenal Ulcers

Etiology and pathogenesis of perforated ulcers. Clinical picture of perforation into the free abdominal cavity, atypical perforation (into the retroperitoneal space, omental bursa). Clinical picture of «covered» perforation. Methods for diagnosing perforation, differential diagnosis. Preoperative preparation, methods of surgical interventions for perforated ulcers, management of the postoperative period.

Classification, etiology and pathogenesis of penetration of gastric and duodenal ulcers. Clinical picture and diagnosis of penetration. Surgical treatment of penetrating ulcers, postoperative management.

Classification, etiology and pathogenesis of pyloroduodenal stenosis, clinical picture depending on the stage of the disease. X-ray and endoscopic semiotics of pyloroduodenal stenosis. Differential diagnosis of pyloroduodenal stenosis.

Indications for surgical treatment of pyloroduodenal stenosis, choice of surgical method depending on the stage of the disease, features of the management of the pre- and postoperative periods.

Callous ulcer: clinical picture, diagnosis, differential diagnosis, treatment.

Supervision of patients with complications of gastroduodenal ulcers: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management.

2.10. Gastroduodenal Bleeding

Pathological anatomy and pathogenesis of bleeding in gastroduodenal ulcers. Clinical picture of bleeding from stomach and duodenal ulcers. Methods for diagnosing bleeding and assessing the volume of blood loss, diagnostic stages. Differential diagnosis of bleeding.

Classification of ulcerative gastroduodenal bleeding. Principles of treatment of gastroduodenal ulcer bleeding: conservative treatment, endoscopic hemostasis, indications for surgical treatment, timing of the operation, choice of operation, postoperative period, prevention and treatment of complications. Difficulties and errors in diagnosis and treatment of bleeding gastroduodenal ulcers.

Supervision of patients with gastroduodenal bleeding: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management.

2.11. Peritonitis

Anatomical and physiological information about the peritoneum. Classification of peritonitis (according to etiology, prevalence, clinical stages), etiopathogenesis of peritonitis. The concept of abdominal sepsis. Clinical picture, diagnosis and differential diagnosis of peritonitis. Principles of treatment of peritonitis: preoperative preparation, main tasks and stages of surgical intervention, principles of antibacterial therapy of acute peritonitis, features of the postoperative period. Ensuring epidemiological safety in the treatment of peritonitis.

Limited peritonitis (subhepatic, subphrenic abscess, pouch of Douglas abscess, interintestinal abscess): causes, clinical picture, diagnosis. Modern methods of treating patients with peritonitis. Possibilities of efferent methods in the complex treatment of peritonitis. Difficulties and errors in treating patients with peritonitis. Supervision of patients with peritonitis: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

2.12. Blunt Abdominal Injury

Blunt abdominal injury: definition of the concept, classification (by type of damaging agent, prevalence, nature and type of injury).

Mechanisms of injury, pathogenesis of abdominal injuries. Clinical picture of injuries to the anterior abdominal wall, hollow and parenchymal organs of the abdominal cavity and retroperitoneal space. Laboratory and instrumental diagnosis of abdominal injuries, differential diagnosis. Treatment of abdominal injuries: indications for surgery, options for surgical interventions. Difficulties and errors in diagnosis and treatment of patients with abdominal trauma.

Supervision of patients with blunt abdominal injury: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

2.13. Portal Hypertension Syndrome

Portal hypertension syndrome: definition of the concept, classification, causes, pathogenesis, course. Special research methods, clinical picture, diagnosis of portal hypertension syndrome, differential diagnosis. Principles of treatment of portal hypertension syndrome: indications for surgery, types of operations. Complications of portal hypertension: clinical picture, diagnosis, treatment, outcomes. Possibilities of using modern minimally invasive technologies in the treatment of portal hypertension syndrome.

Supervision of patients with portal hypertension syndrome: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

2.14. Diseases of the Small Intestine. Diseases of the Large Intestine. Diseases of the Rectum

Crohn's disease: clinical picture, diagnosis, differential diagnosis, principles of conservative treatment, indications for surgical treatment, types of operations. Diverticula of the small intestine: prevalence, etiopathogenesis, clinical picture, diagnosis, treatment, complications of diseases of the small intestine.

Nonspecific ulcerative colitis: clinical picture, diagnosis, conservative treatment, indications for surgical treatment, types of operations.

Diverticular disease of the colon: definition, etiopathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Complications of diverticular disease of the colon: clinical picture, diagnosis, differential diagnosis, treatment.

Intestinal fistulas: definition, etiopathogenesis, classifications by etiology, morphology, localization, clinical picture, diagnosis, treatment, indications for surgical treatment, types of operations.

Supervision of patients with diseases of the colon: collection of complaints and medical history; objective examination of the patient; drawing up a patient

examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis, justifying indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

Anatomical and physiological information about the rectum. Classification of rectal diseases. Special examination methods in proctology.

Hemorrhoids: definition of the concept, classification, etiopathogenesis, clinical picture, diagnosis, differential diagnosis, treatment, indications for various treatment options. Complications of hemorrhoids.

Anal fissure: etiopathogenesis, clinical picture, diagnosis, differential diagnosis, treatment.

Acute paraproctitis: etiopathogenesis, clinical picture, diagnosis, differential diagnosis, treatment. Chronic paraproctitis (rectal fistulas): etiopathogenesis, clinical picture, diagnosis, differential diagnosis, treatment.

Epithelial coccygeal tract: etiopathogenesis, clinical picture, diagnosis, differential diagnosis, treatment.

Rectal prolapse: definition of the concept, etiopathogenesis, clinical picture, diagnosis, treatment, surgical options.

Etiology, mechanisms of pathogenesis, features of the clinical picture of intestinal bleeding. Early and late signs of intestinal bleeding. Differential diagnosis of gastroduodenal and colonic bleeding. Principles of conservative treatment, indications for surgery, types of surgical interventions for intestinal bleeding.

Supervision of patients with diseases of the small, large and rectal intestines: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis, justifying indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

2.15. Diseases of the Spleen. Diseases of the Diaphragm

Anatomical and physiological information about the spleen. Classification of spleen diseases. Splenic cysts: etiology, clinical picture, diagnosis, treatment. Spleen tumors: clinical picture, diagnosis, treatment. Regional circulatory disorders in the spleen (thrombosis, splenic artery aneurysm, splenic infarction): clinical picture, diagnosis, treatment. Surgical pathology of the spleen in infectious diseases (tuberculosis, malaria, leishmaniasis) and diseases of the blood system (anemia, hemoblastosis, thrombocytopenic purpura, etc.).

Anatomical and physiological information about the diaphragm, classification of diseases of the diaphragm. Damage and injury to the diaphragm: causes, clinical picture, diagnosis, treatment.

Diaphragmatic hernia: classification, etiopathogenesis, clinical picture, diagnosis, treatment.

Relaxation of the diaphragm: etiology, pathogenesis, clinical picture, diagnosis, treatment.

Supervision of patients with diseases of the spleen and diaphragm: collection of complaints and medical history; objective examination of the patient; drawing up a

patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

3. Surgery of Heart and Blood Vessels

3.1. Diseases of the Heart

Artificial and assisted circulation: principles, indications for use, myocardial protection. Classification of congenital heart defects. Hemodynamic disorders, clinical picture, diagnosis of congenital heart defects (patent ductus arteriosus, atrial and ventricular septal defects, abnormal drainage of the pulmonary veins, Fallot's disease). Methods for diagnosing acquired heart defects. Indications for surgical treatment of congenital heart defects, methods and timing of surgical interventions, possibilities of percutaneous transluminal correction methods, prognosis, outcomes, prevention.

Indications for surgical treatment and types of surgical interventions for acquired heart defects, the possibility of percutaneous transluminal treatment methods. Heart valve replacement, pre- and postoperative period, outcomes. History of surgical treatment of coronary heart disease. Indications for surgical treatment of coronary heart disease, choice of surgical method, immediate and long-term results. Possibilities of percutaneous transluminal methods (balloon angioplasty, stenting, transmyocardial laser revascularization) in the treatment of coronary heart disease.

Post-infarction cardiac aneurysm: diagnosis, indications for surgical treatment, types of operations.

Pericarditis: classification, indications and types of surgical treatment. Surgery for cardiac arrhythmias (atrial fibrillation, transverse block, ventricular and supraventricular arrhythmias). Diagnosis of cardiac arrhythmias, correction methods (radiofrequency ablation, traditional surgery, artificial pacemaker, etc.).

Supervision of patients with heart diseases requiring surgical correction methods: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; drawing up a conservative treatment plan; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

3.2. Diseases of the Aorta. Surgery of the Lymphatic System

Aortic aneurysms: classification (by location, shape, origin, pathogenesis, size), hemodynamic disorders, clinical picture, diagnosis, indications for surgical and endovascular treatment.

Aneurysms of the aortic arch. Aneurysms of the thoracic aorta. Abdominal aortic aneurysms. Complicated forms of aortic aneurysm (dissecting aneurysm, complete and incomplete ruptures): classification, etiopathogenesis, hemodynamic disorders, clinical manifestations, diagnosis, differential diagnosis, treatment (traditional surgical and endovascular operations).

Coarctation of the aorta: clinical picture, diagnosis, differential diagnosis, principles of treatment.

Anatomical and physiological information about the lymphatic system. Classification of diseases of the lymphatic system. Methods for studying the lymphatic system. Diseases of the lymphatic system.

Insufficiency of lymph circulation: classification, causes, clinical picture, diagnosis, treatment.

Elephantiasis: causes, clinical picture, diagnosis, treatment.

Lymphadenitis, lymphangitis: causes, clinical picture, diagnosis, treatment.

Supervision of patients with diseases of the aorta and lymphatic system requiring surgical methods of correction: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; drawing up a conservative treatment plan; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

3.3. Diseases of the Arteries. Acute Arterial Obstruction

Definition of the concept, etiopathogenesis of obliterating arterial diseases (obliterating atherosclerosis, nonspecific aortoarteritis, obliterating endarteritis).

Chronic ischemia of the upper extremities: classification, clinical picture, diagnosis, differential diagnosis, indications for surgical treatment, types of operations.

Chronic and acute disorders of visceral circulation: classification, clinical picture, diagnosis, differential diagnosis, indications for surgical treatment, types of operations.

Occlusive-stenotic lesions of the terminal aorta, iliac arteries and arteries of the lower extremities: classification, clinical picture, diagnosis, differential diagnosis, treatment (conservative treatment, indications for surgical treatment, types of operations, possibilities of surgical and endovascular correction). Pokrovsky-Fontaine classification. Chronic critical (threatening limb loss) ischemia of the lower extremities.

Acute arterial obstruction: definition of the concept, prevalence, classification, etiopathogenesis, clinical picture, diagnosis and differential diagnosis, treatment (conservative treatment, indications for surgery, types of operations, possibilities of surgical and endovascular treatment methods, features of the pre- and postoperative periods).

Supervision of patients with arterial diseases: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; drawing up a conservative treatment plan; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

Supervision of patients with arterial diseases: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental

examination methods; making a diagnosis; drawing up a conservative treatment plan; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

3.4. Venous Diseases of Extremities

Anatomical and physiological information about the veins of the lower extremities. Clinical semiotics of diseases of the veins of the extremities. Laboratory and instrumental diagnostics of diseases of the veins of the extremities, differential diagnosis.

Congenital venous dysplasia: clinical picture, diagnosis, principles of treatment.

Damage to the main veins of the extremities: clinical picture, diagnosis, treatment.

Varicose veins of the lower extremities: CEAP classification, etiology, pathogenesis, clinical picture of the disease, research methods. Treatment of varicose veins of the lower extremities: compression therapy, types of operations, features of laser technologies and sclerotherapy.

Complications of varicose veins: clinical picture, diagnosis, treatment. Occlusion of the branches of the superior vena cava. Modern interventional technologies in the treatment of patients with diseases of the main veins. Difficulties and errors in diagnosing and treating patients with diseases of the veins of the extremities.

Supervision of patients with diseases of the veins of the extremities: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; drawing up a conservative treatment plan; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card.

3.5. Deep Vein Thrombosis. Post-thrombotic disease

Deep vein thrombosis: classification, etiopathogenesis, clinical picture, laboratory and instrumental diagnostics. Principles of treatment of deep vein thrombosis (drug treatment, compression therapy, indications for surgical treatment, types of operations), prognosis, principles of rehabilitation. Complications of thrombosis of the main veins.

Thrombophlebitis and varicothrombophlebitis of the saphenous veins: classification, etiopathogenesis, clinical picture, laboratory and instrumental diagnostics, principles of treatment.

Postthrombotic disease: classification, etiopathogenesis, clinical picture, diagnosis, principles of treatment, indications for surgical treatment, types of operations.

Supervision of patients with thrombosis, thrombophlebitis, post-thrombatic disease: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; drawing up a

conservative treatment plan; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management.

4. Chest Surgery

4.1. Diseases of the Lungs and Pleura

Anatomical and physiological information about the lungs and pleura. Spontaneous pneumothorax: classification, clinical course, diagnosis, treatment.

Suppurative diseases of the lungs and pleura: classification, etiology, pathogenesis.

Acute lung abscess and lung gangrene: paths of occurrence, mechanisms of development, clinical course, diagnosis.

Complications of acute pulmonary suppuration: diagnosis, differential diagnosis, principles of treatment, indications for surgical treatment, types of interventions.

Chronic lung abscesses: development paths, clinical course, diagnosis, differential diagnosis, treatment.

Acute pleural empyema and pyopneumothorax: epidemiology, clinical course, diagnosis, differential diagnosis. Treatment of acute empyema: general principles, indications for surgical treatment, types of interventions. Chronic pleural empyema: clinical course, diagnosis, treatment.

Bronchial fistulas: classification, etiology, pathogenesis, clinical course, diagnosis, treatment (conservative, indications for surgical treatment, types of operations).

Bronchiectasis: classification, indications for surgical treatment.

Lung cysts: etiology, clinical picture, diagnosis, indications for surgical treatment, types of operations.

Modern minimally invasive methods of treating diseases of the lungs and pleura.

Supervision of patients with diseases of the lungs and pleura requiring surgical methods of correction: collection of complaints and medical history; objective examination of the patient; drawing up a patient examination plan; interpretation of the results of laboratory and instrumental examination methods; making a diagnosis; justification of indications for surgical intervention; drawing up a plan for surgical intervention; postoperative patient management. Writing an educational medical card for an inpatient patient.

4.2. Diseases of the Mediastinum

Topographic anatomy of the mediastinum. Classification, etiology, clinical picture, diagnostics and differential diagnosis of mediastinitis. Treatment plan for mediastinitis of different etiology. Mediastinal drainage principles and types.

Tumors of the anterior mediastinum (dermoid cyst, thymoma, stromal tumors): etiology and pathological anatomy, diagnosis and operative treatment.

Tumors of posterior mediastinum (neurogenic, angiogenec, bronchogenic tumors and pericardial cysts): etiology, pathological anatomy, diagnosis, therapy.

Management of patients with diseases of mediastinum that require surgery: collection of complications and anamnesis; objective examination of a patient; planning of patient’s investigations; interpretation of laboratory and diagnostic

findings; making a diagnosis; indications for surgery; making a plan of surgery; postoperative care. Writing an educational medical card.

4.3. Diseases and Trauma of the Esophagus

Anatomy and physiology, classification of esophagus diseases, special methods of diagnostics. Common symptoms of esophageal disease.

Chemical burn of the esophagus: incidence, classifications according to the depth of the lesion, pathologicoanatomic stage, etiology and pathogenesis, clinical picture, diagnostics, differential diagnosis, treatment. Complications (early and late): clinical features, diagnostics, therapy. Neuromuscular esophageal diseases.

Hypertensive lower esophageal sphincter (achalasia): classification, etiology and pathogenesis, clinical manifestations, diagnosis, indications for surgery, types of operations.

Esophageal diverticula: classification, clinical picture, diagnosis, indications for surgery, types of operations.

Foreign bodies in the esophagus: clinical picture, diagnosis, therapy.

Benign tumors of the esophagus: clinical picture, diagnosis, indications for surgery.

Esophageal trauma. Causes, clinical picture, diagnosis, management. Spontaneous esophageal rupture.

Management of patients with diseases and trauma of esophagus that require surgery: collection of complications and anamnesis; objective examination of a patient; planning of patient's investigations; interpretation of laboratory and diagnostic findings; making a diagnosis; indications for surgery; making a plan of surgery; postoperative care. Writing an educational medical card.

4.4. Blunt Chest Trauma

Blunt chest trauma: definition, classification (by type of injury agent, nature and type of injury), clinical picture, laboratory and instrumental diagnostics, differential diagnosis, principles of treatment, features of postoperative period. Complications of blunt chest trauma: clinical manifestations, diagnosis, treatment. Difficulties and mistakes in diagnostics and treatment of patients with blunt chest trauma.

Management of patients with blunt chest trauma: collection of complications and anamnesis; objective examination of a patient; planning of patient's investigations; interpretation of laboratory and diagnostic findings; making a diagnosis; indications for surgery; making a plan of surgery; postoperative care. Writing an educational medical card.

5. Transplantation of Organs and Tissues

Definitions: transplantation, recipient, donor, classification of the transplants. Legal and ethical problems of the organ transplantation. Transplantation immunologic basis.

Kidney transplantation: history, principles of donor selection, preoperative preparation, surgical technique, postoperative management.

Heart transplantation, indications, donor selection, surgical technique, postoperative management.

Pancreas transplantation: general information, recipient selection, indications

for surgery, types of operations, postoperative management.

Liver transplantation: donor and recipient selection, surgical technique, postoperative management. Other types of transplantations. Prospects and directions of transplantation development.

Management of patients who are being prepared to transplantation: collection of complications and anamnesis; objective examination of a patient; planning of patient's investigations; interpretation of laboratory and diagnostic findings; making a diagnosis; indications for surgery; making a plan of surgery; postoperative care. Writing an educational medical card.

6. Surgical Diseases of the Endocrine Glands

6.1. Diabetes Mellitus in Surgery

Definition of the diabetes mellitus, classification. Peculiarities of pre- and postoperative period in diabetic patients. Principles of emergency medical help. Complications requiring surgical intervention. Perspective methods of treatment of diabetes mellitus and its complications.

Diabetic foot syndrome: classification, etiology and pathogenesis, diagnosis, therapy, complex prophylaxis.

Management of patients with diabetes mellitus and its complications that require surgery: collection of complications and anamnesis; objective examination of a patient; planning of patient's investigations; interpretation of laboratory and diagnostic findings; making a diagnosis; indications for surgery; making a plan of surgery; postoperative care. Writing an educational medical card.

6.2. Diseases of the Thyroid and Parathyroid Glands

Nontoxic goiter, etiology and pathogenesis, clinical manifestations, diagnosis, indications for surgery, type of operations.

Hyperthyroidism, etiology and pathogenesis, clinical manifestations, diagnosis, indications for surgery, types of operations.

Diffuse toxic goiter, etiology and pathogenesis, clinical manifestations, diagnosis, indications for surgery, types of operations.

Thyroiditis. Lymphocytic (Hashimoto's) thyroiditis. Etiology and pathogenesis, clinical manifestations, diagnosis, indications for surgery, types of operations. Invasive fibrous thyroiditis (Riedel's thyroiditis). Etiology and pathogenesis, clinical manifestations, diagnosis, indications for surgery, types of operations. Subacute (de Quervain's) thyroiditis. Etiology and pathogenesis, clinical manifestations, diagnosis, indications for surgery, types of operations.

Acute thyroiditis: etiology and pathogenesis, clinical manifestations, diagnostics, differential diagnosis, indications for surgery, types of operations.

Hyperparathyroidism, etiology and pathogenesis, clinical manifestations, diagnosis, indications for surgery, types of operations.

Management of patients with diseases of the diaphragm that require surgery: collection of complications and anamnesis; objective examination of a patient; planning of patient's investigations; interpretation of laboratory and diagnostic findings; making a diagnosis; planning conservative treatment; indications for surgery; making a plan of surgery; postoperative care. Writing an educational medical card.

7. Surgical Diseases of the Breast

Anatomy and physiology of the breast. Classification of the diseases.

Congenital anomalies, clinical picture, diagnostics, differential diagnosis, therapy.

Inflammatory disorders (specific and nonspecific), clinical picture, diagnosis, therapy.

Breast injury: clinical picture, diagnosis, therapy.

Dishormonal and functional disorders of the breast: clinical picture, diagnostics, differential diagnosis, treatment.

Management of patients with diseases of the breast: collection of complications and anamnesis; objective examination of a patient; planning of patient's investigations; interpretation of laboratory and diagnostic findings; making a diagnosis; indications for surgery; making a plan of surgery; postoperative care. Writing an educational medical card.

8. Performing practical skills on simulation equipment

Hemostatic tourniquet application. Skin suturing and removing of the skin sutures. Finger rectum examination.

ACADEMIC DISCIPLINE «SURGICAL DISEASES» CURRICULAR CHART

Section, topic #	Section (topic) name	Number of hours		Supervised student independent work	Literature	Practical skills	Form of control	
		lectures	practical				of practical skills	of current / intermediate assessment
	7 semester							
	Lectures	**12**	**-**	**3**				
2.1	Acute and Chronic Appendicitis, Complications of the Acute Appendicitis	1,5	-	-	1, 4, 5, 9, 11			
2.2	Hernias	1,5	-	1,5	1, 5, 9, 11			Tests
2.3	Acute Pancreatitis	1,5	-	-	1, 5, 9, 11			
2.6	Diseases of the Bile Ducts	1,5	-	-	1, 5, 7, 9, 11			
2.8	Intestinal Obstruction	1,5	-	-	1, 5, 9, 11			
2.9-2.10	Complications of the Gastroduodenal Ulcers. Gastroduodenal Bleeding	1,5	-	-	1, 5, 9, 11			
2.11	Peritonitis	1,5	-	1,5	1, 4, 5, 9, 11			Tests
2.14	Diseases of the Small Intestine, Large Intestine and Rectum	1,5	-	-	1, 5, 9, 11			
	Practical lessons	-	**54**	-				
1. 2.1	Current Issues in Surgery. Deontology in Surgery. Acute and Chronic Appendicitis, Complications of the Acute Appendicitis	-	6	-	1, 4, 5, 9, 11			Test, interview, solving situational tasks
2.2	Hernias	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks
2.3	Acute Pancreatitis	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks
2.6	Diseases of the Bile Ducts	-	6	-	1, 5, 7, 9,			Control work*, test,

					11			interview, solving situational tasks
2.4	Complications of the Acute Pancreatitis. Chronic Pancreatitis	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks, assessment based on a business play
2.9	Complications of the Gastroduodenal Ulcers	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks
2.10	Gastroduodenal Bleeding	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks
2.8	Intestinal Obstruction	-	6	-	1, 5, 9, 11	Detection of radiologic criteria of acute intestinal obstruction air-fluid levels («Kloeber's bowl») on an abdominal radiograph	Situational tasks solving*	Test, interview, solving situational tasks
2.11	Peritonitis	-	6	-	1, 4, 5, 9, 11	Detection of free gas within the peritoneal cavity on an abdominal radiograph	Situational tasks solving*	Test, interview, solving situational tasks
	8 semester							
	Lectures	**9**	**-**	**6**				
3.1	Diseases of the Heart	1,5	-	1,5	1, 5, 9, 11			Tests
3.3	Diseases of the Arteries. Acute Arterial Obstruction	1,5	-	1,5	1-3, 5, 9-11			Tests
3.4	Venous Diseases of Extremities	1,5	-	1,5	1, 5, 9, 11			Tests
4.1	Diseases of the Lungs and Pleura	1,5	-	-	1, 5, 9, 11			
4.3	Diseases and Trauma of the Esophagus	1,5	-	-	1, 5, 9, 11			
2.7	Cholestasis	1,5	-	-	1, 5, 7, 9, 11			
2.5	Surgery of Parasitic Diseases	-	-	1,5	1, 5, 9, 11			Tests
	Practical lessons	-	**36**	-				
2.14	Diseases of the Small Intestine, Large Intestine and Rectum	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks

3.1	Diseases of the Heart	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks
3.2	Diseases of the Aorta. Surgery of the Lymphatic System	-	6	-	1, 2, 5, 9, 11			Test, interview, solving situational tasks
3.3	Diseases of the Arteries. Acute Arterial Obstruction	-	6	-	1, 3, 5, 9-11			Test, interview, solving situational tasks, assessment based on a business play
3.4	Venous Diseases of Extremities	-	6	-	1, 5, 9, 11	Identification of basic surgical instruments with an explanation of their purpose	Situational tasks solving *	Test, interview, solving situational tasks
4.1	Diseases of the Lungs and Pleura	-	6	-	1, 5, 9, 11	Diagnosis of pneumothorax using a chest X-ray	Situational tasks solving *	Control work*, test, interview, solving situational tasks
								Examination
9 semester								
	Lectures	**3**	**-**	**3**				
2.12	Blunt abdominal trauma	1,5	-	-	1, 5, 8, 9, 11			
2.13	Portal hypertension	1,5	-	1,5	1, 5, 9, 11			Tests
4.4	Blunt chest trauma	-	-	1,5	1, 5, 8, 9, 11			Tests
	Practical lessons	-	**36**	-				
2.7	Postcholecystectomy syndrome Cholestasis syndrome	-	6	-	1, 5, 7, 9, 11			Test, interview, solving situational tasks
2.5	Liver Diseases. Surgical treatment for parasitic diseases	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks
2.13	Portal hypertension	-	6	-	1, 5, 9, 11			Control work*; test, interview, solving situational tasks
2.15	Diseases of the spleen. Diseases of the diaphragm	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks
4.4	Blunt chest trauma	-	6	-	1, 5, 8, 9, 11			Test, interview, solving situational tasks*; assessment based on a

								business play
2.12	Blunt abdominal trauma	-	6	-	1, 5, 8, 9, 11			Test, interview, solving situational tasks
10 semester								
	Lectures	**3**	-	-				
5.	Transplantation of organs and tissues	1,5	-	-	1, 5, 9, 11			
6.1	Diabetes mellitus in surgery	1,5	-	-	1, 5, 9, 11			
	Practical lessons		**45**					
5.	Transplantation of organs and tissues	-	6	-	1, 5, 9, 11			Control work*; test, interview, solving situational tasks
6.1	Diabetes mellitus in surgery	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks
3.5	Thrombosis and thrombophlebitis of the main veins. Postthrombotic disease	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks
6.2	Diseases of thyroid and parathyroid glands	-	5	-	1, 5, 6, 9, 11			Test, interview, solving situational tasks
4.2	Mediastinal diseases	-	5	-	1, 5, 9, 11			Test, interview, solving situational tasks
4.3	Diseases and injuries of the esophagus	-	6	-	1, 5, 9, 11			Test, interview, solving situational tasks
7.	Surgery of breast diseases	-	5	-	1, 5, 9, 11			Test, interview, solving situational tasks; assessment based on a business play
8.	Performing practical skills on simulation equipment	-	6	-	1, 11	Applying an Esmarh-type hemostatic tourniquet. Application and removal of skin sutures. Digital rectal examination	Performing a practical skill on simulation equipment*	
	Total hours	**27**	**171**	**12**				Examination

* This is a mandatory form of current assessment.

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic (relevant):

1. Essentials of general surgery and surgical specialties / P. F. Lawrence [et al.]. – 6th ed. – Philadelphia : Wolters Kluwer, 2019. – 747 p.

Additional:

2. Zhura, A. V. Diseases of the aorta : educational and methodical manual / A. V. Zhura, V. Ya. Khryshchanovich – Minsk : BSMU, 2016. – 28 p.
3. Zhura, A. V. Diseases of arteries : educational and methodical manual / A. V. Zhura, S. I. Tretyak, A. V. Romanovich. – Minsk : BSMU, 2016. – 40 p.
4. Peritonitis : educational and methodical manual / A. V. Zhura [et al.]. – Minsk : BSMU, 2020. – 40 p.
5. Tretyak, S. I. Scheme of educational case history on surgical diseases : methodological recommendations / S. I. Tretyak, A. V. Zhura. – Minsk : BSMU, 2017. – 7 p.
6. Thyroid disorders : educational and methodical manual / S. V. Yakubovsky [et al.] – Minsk : BSMU, 2022. – 28 p.
7. Zhura, A. V. Diseases of gallbladder and bile ducts : educational and methodical manual / A. V. Zhura, A. V. Bolshov. – Minsk : BSMU, 2015. – 40 p.
8. Zhura, A. V. Blunt abdominal and chest trauma : educational and methodical manual / A. V. Zhura, V. G. Kozlov. – Minsk : BSMU, 2015. – 40 p.
9. Ignatovich, I. N. Examinational questions on surgical diseases : methodological recommendations / I. N. Ignatovich, S. V. Yakubovsky, A. V. Zhura. – Minsk : BSMU, 2018. – 76 p.
10. Ignatovich, I. N. Management of chronic limb-threatening ischemia : educational and methodical manual / I. N. Ignatovich, S. V. Yakubovsky, A. V. Zhura. – Minsk : BSMU, 2021. – 31 p.

Electronic courseware for the academic discipline «Surgical Diseases»

11. *https://etest.bsmu.by/course/view.php?id=1613*

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

The time allocated for independent work can be used by students for:

preparing for lectures and practical classes;

preparing for exams in the academic discipline;

studying the topics (issues) designed for independent work;

problem solving;

performing research and creative tasks;

preparing thematic reports, abstracts, presentations;

performing practical tasks;

taking notes of educational literature;

compiling a review of scientific literature on a given topic;

execution of information and demonstration materials (stands, posters, graphs, tables, newspapers, etc.);

compilation of a thematic selection of literature sources, Internet sources.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF SUPERVISED STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

APPROXIMATE LIST OF TASKS FOR SUPERVISED STUDENT INDEPENDENT WORK:

studying the topics (issues) designed for independent work;

taking notes of original sources (sections of anthologies, collections of documents, monographs, textbooks).

FORMS OF CONTROL OF SUPERVISED STUDENT INDEPENDENT WORK:

tests.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms of current certification are used to diagnose competencies:

control work;

tests;

interview

solving situational tasks;

assessment based on a business play;

assessment using simulation equipment.

LIST OF AVAILABLE TEACHING METHODS

Traditional method;

active (interactive) methods:

training based on simulation technologies;

Problem-Based Learning (PBL);

Team-Based Learning (TBL);

Case-Based Learning (CBL);

Research-Based Learning (RBL).

LIST OF PRACTICAL SKILLS

Name of practical skills	Form of practical skills control
1. Diagnosis of pneumothorax using a chest X-ray	Situational tasks solving
2. Detection of free gas within the peritoneal cavity on an abdominal radiograph	Situational tasks solving
3. Detection of radiologic criteria of acute intestinal obstruction air-fluid levels («Kloeber's bowl») on an abdominal radiograph	Situational tasks solving
4. Applying an Esmarh-type hemostatic tourniquet	Performing a practical skill on simulation equipment
5. Application and removal of skin sutures	Performing a practical skill on simulation equipment
6. Digital rectal examination	Performing a practical skill on

Name of practical skills	Form of practical skills control
	simulation equipment
7. Identification of basic surgical instruments with an explanation of their purpose	Situational tasks solving

LIST OF SIMULATION EQUIPMENT USED

1. A simulator of the patient's limb.
2. Rectal exam simulator.

PROTOCOL OF THE CURRICULUM APPROVAL BY OTHER DEPARTMENTS

Title of the discipline requiring approval	Department	Amendments to the curriculum in the academic discipline	Title of the discipline requiring approval
1. Traumatology and Orthopedics	Traumatology and Orthopedics with an advanced training and retraining course	No	Protocol # 14 of 30.04.2026
2. Urology	Urology and Nephrology with an advanced training and retraining course	No	Protocol # 14 of 30.04.2026
3. Oncology	Oncology with an advanced training and retraining course	No	Protocol # 14 of 30.04.2026

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Curriculum content, composition and the accompanying documents comply with the established requirements.

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