

**Federal State Budgetary Educational Institution  
of Higher Education  
North-Western State Medical University  
named after I.I. Mechnikov  
of the Ministry of Health of the Russian Federation**

(North-Western State Medical University named after I.I. Mechnikov,  
Ministry of Health of the Russian Federation)

**COURSE SYLLABUS**

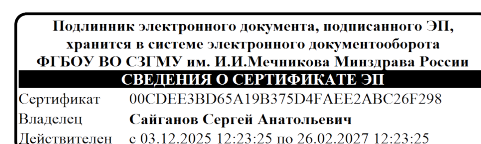
«Clinical Surgery»

**Specialty:** 31.05.01 General Medicine

**Specialization:** Organization and provision of primary health care to the adult population in medical organizations

**Language of instruction:** English

2021



This Syllabus for the course **Clinical Surgery** has been developed in accordance with the Federal State Educational Standard of Higher Education for the specialist degree program in the specialty 31.05.01 General Medicine (for international students), approved by Order No. 988 of the Ministry of Science and Higher Education of the Russian Federation dated August 12, 2020, 'On approval of the Federal State Educational Standard of Higher Education for the specialist degree program in the specialty 31.05.01 General Medicine.'

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**Approval:**

The Course Syllabus was discussed at a meeting of the Department of Clinical Surgery named after V.A. Opperl.

..... 2021 , Minutes № Место для ввода текста.

Head of the Department \_\_\_\_\_ / E.E. Topuzov/  
(signature)

Approved by the Methodological Committee for the specialty 31.05.01 General Medicine  
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Chairperson \_\_\_\_\_ / I.G. Bakulin /

Reviewed by the Methodological Council and recommended for approval by the Academic Council

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Chairperson \_\_\_\_\_ / S.A. Artyushkin /

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## 1. Aim of the course

The aim of the course **Clinical Surgery** is to provide training in the main types of diseases requiring surgical treatment and/or specialized diagnostic methods performed in a surgical inpatient setting and in the surgical departments of outpatient clinics; to develop and form clinical thinking; to improve skills of clinical examination of surgical patients using modern laboratory, instrumental, radiological, and other diagnostic methods; and to develop the ability to generalize and analyze the obtained data in order to substantiate the diagnosis, perform differential diagnosis, and determine patient management tactics.

## 2. Place of the course in the structure of the educational program

The course «Clinical Surgery» is part of the compulsory component of Block 1 Courses (Modules) of the main professional educational program in the specialty 31.05.01 General Medicine (specialist degree level), specialization Organization and provision of primary health care to the adult population in medical organizations.

The course is mandatory for study.

## 3. Planned learning outcomes of the course correlated with the planned learning outcomes of the educational program

Code and title of the competence	Code and title of the competence achievement indicator
<p><b>General Competencies GPC – 7</b></p> <p>Able to prescribe treatment and monitor its effectiveness and safety.</p>	<p><b>Indicator 1 GPC-7.1</b></p> <p>Prescribes a therapeutic and protective regimen and determines the place and type of treatment taking into account the severity of the patient’s condition.</p>
	<p><b>Indicator 2 GPC-7.2</b></p> <p>Selects medicinal products, dosage forms, and routes of administration, and carries out rational substitution of medicinal products based on the patient’s condition.</p>
	<p><b>Indicator 3 GPC-7.3</b></p> <p>Predicts adverse drug reactions and implements measures for their prevention.</p>
	<p><b>Indicator 4 GPC-7.4</b></p> <p>Monitors the effectiveness and safety of prescribed treatment at all stages of its implementation.</p>
<p><b>Professional Competencies PC-2</b></p> <p>Able to conduct patient examinations to identify major pathological conditions, symptoms, disease syndromes, and nosological forms.</p>	<p><b>Indicator 1 PC-2.1</b></p> <p>Conducts patient interviewing and examination (collection of complaints, medical and life history, physical examination, palpation, percussion, and auscultation).</p>
	<p><b>Indicator 2 PC-2.2</b></p> <p>Formulates a preliminary diagnosis, develops a diagnostic plan, and refers the patient for laboratory and/or instrumental examinations when medically indicated, in accordance with current regulations for the provision of medical care,</p>

	clinical guidelines, and medical care standards.
<p align="center"><b>Professional Competencies PC-3</b></p> <p>Able to manage and treat patients requiring medical care.</p>	<p align="center"><b>Indicator 1 PC-3.1</b></p> <p>Develops a treatment plan and prescribes non-pharmacological and pharmacological therapy for patients, taking into account the diagnosis, age, and clinical presentation, in accordance with current regulations for the provision of medical care, clinical guidelines, and medical care standards in the primary health care setting.</p>
	<p align="center"><b>Indicator 2 PC-3.2</b></p> <p>Assesses the effectiveness and safety of the use of medicinal products, medical devices, therapeutic nutrition, and other treatment methods in the primary health care setting.</p>

Code of the competence achievement indicator	Learning outcomes (Assessment criteria)	Assessment methods
<b>Indicator 1 GPC-7.1</b>	<p><b>Knows:</b> the etiology and pathogenesis of surgical diseases; the impact of environmental factors, nutrition, lifestyle, and violations of sanitary and hygienic standards on the occurrence of surgical diseases and the development of their complications; the clinical presentation and features of the course of surgical diseases and their complications in different age groups; complications of other diseases requiring surgical intervention; indications for emergency hospitalization depending on the development of acute complications of surgical diseases; methods of conservative treatment and prevention of surgical diseases.</p>	<p>Tests Control questions Cases Academic case history Clinical case presentation Course work</p>
	<p><b>Able to:</b> assess the severity of a surgical patient's condition based on data obtained from history taking, inspection, and physical examination; interpret the results of laboratory and instrumental investigations.</p>	
	<p><b>Has skills:</b> of taking medical history, interviewing the patient, and interpreting laboratory and instrumental investigation data in order to determine the severity of the patient's condition and further treatment tactics.</p>	
<b>Indicator 2 GPC-7.2</b>	<p><b>Knows:</b> the principles of conservative treatment; indications and contraindications for the use of medications in surgical patients with various nosological entities, taking into account the effects of medications on the course of the pathological process; indications for pharmacotherapy in surgical patients</p>	<p>Tests Control questions Cases Academic case history Clinical case</p>

	<p>depending on their condition, stage of treatment, and the nature of disease progression; methods of drug administration and selection of the most rational route of administration depending on the condition of surgical patients and the stage of treatment.</p>	<p>presentation Course work</p>
	<p><b>Able to:</b> develop a plan for conservative pharmacological therapy in a surgical patient depending on the patient's condition, stage of treatment, and the development of complications of the underlying disease or the postoperative period.</p>	
	<p><b>Has skills:</b> of planning and prescribing conservative pharmacological therapy for surgical patients depending on the nosological entity.</p>	
<p><b>Indicator 3 GPC-7.3</b></p>	<p><b>Knows:</b> the principles of conservative treatment; indications and contraindications for the use of medications in surgical patients with various nosological entities, taking into account the effects of medications on the course of the pathological process; the action of different groups of medications, as well as adverse effects associated with their use; clinical manifestations of adverse effects and complications resulting from the use of medications in surgical patients.</p>	<p>Tests Control questions Cases Academic case history Clinical case presentation Course work</p>
	<p><b>Able to:</b> identify adverse side effects and complications resulting from the use of medications in surgical patients; correct negative effects of medications by discontinuing them or replacing them with drugs from another pharmacological group.</p>	
	<p><b>Has skills:</b> of planning treatment tactics and prescribing conservative pharmacological therapy for surgical patients depending on the nosological phenomenon.</p>	
<p><b>Indicator 4 GPC-7.4</b></p>	<p><b>Knows:</b> the principles of management of surgical patients, including conservative and pharmacological therapy as well as operative surgical treatment, taking into account the impact of various treatment modalities on the course of the pathological process; possible complications and adverse effects associated with different types of treatment of surgical patients, depending on the nosological entity, stage of the disease, clinical course, patient's condition, and the presence of comorbidities.</p>	<p>Tests Control questions Cases Academic case history Clinical case presentation Course work</p>
	<p><b>Able to:</b> assess the condition of a surgical patient in the preoperative and postoperative periods;</p>	

	<p>identify complications and determine their severity in the preoperative and postoperative periods.</p> <p><b>Has skills:</b> of performing patient examination and interpreting laboratory and instrumental investigation data at various stages of treatment of surgical patients.</p>	
<b>Indicator 1 PC-2.1</b>	<p><b>Knows:</b> the etiology and pathogenesis of surgical diseases; factors related to the environment, nutrition, and lifestyle that influence the development of surgical diseases and their complications; the clinical presentation and features of the course of surgical diseases in different age groups; methods of collecting chief complaints and medical history in patients with surgical diseases; clinical manifestations of major surgical syndromes (peritonitis and inflammatory diseases of the abdominal organs, gastrointestinal bleeding, intestinal obstruction, pneumothorax, etc.); features and clinical manifestations of complications of surgical diseases.</p> <p><b>Able to:</b> take medical history, interview a surgical patient, and perform physical examination (inspection, palpation, auscultation, blood pressure measurement, assessment of arterial pulse characteristics); perform superficial and deep abdominal palpation, auscultation of the abdominal cavity and identify pathological sounds; identify signs and symptoms of major surgical diseases and their complications.</p> <p><b>Has skills:</b> of taking medical history, interviewing, and examining the patient.</p>	<p>Tests Control questions Cases Academic case history Clinical case presentation Course work</p>
<b>Indicator 2 PC-2.2</b>	<p><b>Knows:</b> the clinical manifestations of major surgical diseases and principles of their differential diagnosis; nosological principles for the classification of surgical diseases; principles of the International Classification of Diseases (ICD); laboratory and instrumental diagnostic methods for surgical diseases, including indications, contraindications, and techniques for performing imaging, endoscopic, morphological, and laboratory investigations in surgical patients.</p> <p><b>Able to:</b> navigate the main classifications of surgical diseases; formulate a preliminary diagnosis; determine the scope of additional investigations required to specify the diagnosis; perform differential diagnosis of surgical diseases based on clinical, laboratory, and instrumental data; interpret the results of imaging studies, biochemical</p>	<p>Tests Control questions Cases Academic case history Clinical case presentation Course work</p>

	<p>analyses of human biological fluids, as well as other laboratory and instrumental diagnostic methods.</p> <p><b>Has skills:</b>  of using medical and anatomical conceptual frameworks and specialized terminology (in Russian, Latin, and Greek);  of developing an examination plan for a surgical patient for the purpose of differential diagnosis;  of correlating morphological and clinical manifestations of surgical diseases for differential diagnosis;  of formulating a preliminary diagnosis based on the results of laboratory and instrumental investigations.</p>	
<b>Indicator 1 PC-3.1</b>	<p><b>Knows:</b>  the clinical manifestations of major surgical diseases, their specific features, and possible complications in different age groups, as well as principles of their differential diagnosis based on clinical and laboratory-instrumental investigations;  the basic principles, indications, and contraindications for conservative treatment of surgical diseases, taking into account the effects of medications on the course of the pathological process;  indications and contraindications for operative treatment of surgical diseases.</p> <p><b>Able to:</b>  substantiate the principles of pathogenetic therapy in surgical diseases in the preoperative and postoperative periods;  develop an action plan for surgical patients, taking into account the course of the disease;  formulate indications for the selected treatment method with regard to the clinical presentation and specific features of the disease course in surgical patients;  justify pharmacotherapy for a particular surgical patient, taking into account the course of the disease and the presence or absence of complications in the preoperative and postoperative periods;  determine indications for operative surgical treatment.</p> <p><b>Has skills:</b>  of planning treatment tactics for surgical patients with a typical course of the disease.</p>	<p>Tests  Control questions  Cases  Academic case history  Clinical case presentation  Course work</p>
<b>Indicator 2 PC-3.2</b>	<p><b>Knows:</b>  the basic principles, indications, and contraindications for conservative treatment of surgical diseases, taking into account the effects of medications on the course of the pathological process;  the rational selection of specific medications for the treatment of major pathological syndromes, diseases, and emergency conditions in surgical patients.</p> <p><b>Able to:</b></p>	<p>Tests  Control questions  Cases  Academic case history  Clinical case presentation</p>

	determine the route of administration, regimen, and dosage of medications; assess the effectiveness and safety of the administered treatment based on monitoring the clinical course of a surgical disease; apply various routes of medication administration.	
	<b>Has skills:</b> of prescribing medications and monitoring their effectiveness when using conservative methods for the treatment and prevention of surgical diseases.	

#### 4. Scope of the course and types of learning activities

Type of learning activity	Workload	Semesters	
		9	10
<b>Contact hours (student–instructor interaction)</b>	<b>220</b>	<b>108</b>	<b>112</b>
<b>Classroom based work:</b>	216	108	108
Lectures (L)	72	36	36
Practical classes (PC)	144	72	72
<b>Self-study:</b>	<b>140</b>	<b>54</b>	<b>86</b>
During the period of theoretical instruction	108	54	54
Preparation for the examination	32		32
<b>Interim assessment:</b> examination, including sitting the examination and group consultations	4		4
<b>Total workload:</b>		<b>360</b>	
	Academic hours		
	Credit units	<b>10</b>	

#### 5. Content of the course structured by sections (topics), indicating the number of academic hours and types of classes

##### 5.1. Content of course sections

№	Title of the course section	Annotated content of the course section	Competencies formed
1	Surgical diseases of the digestive organs, abdominal cavity, and abdominal wall	Study of the etiology, pathogenesis, clinical presentation, diagnosis and differential diagnosis, principles of surgical tactics, and surgical treatment of diseases of the digestive organs, abdominal cavity, and abdominal wall. Particular attention is paid to atypical forms of disease progression, clinical manifestations, diagnostic testing, and treatment strategies in patients of different age groups.	GPC-7 PC-2 PC-3
2	Surgical diseases of the chest organs, lungs, pleura, and mediastinum	Study of the etiology, pathogenesis, clinical presentation, diagnosis and differential diagnosis, principles of surgical tactics, and surgical treatment of diseases of the chest organs, lungs,	GPC-7 PC-2 PC-3

		pleura, and mediastinum. Particular attention is paid to atypical forms of disease progression, clinical manifestations, diagnostic testing, and treatment strategies in patients of different age groups.	
3	Surgical diseases of the vessels	Study of the etiology, pathogenesis, clinical presentation, diagnosis and differential diagnosis, principles of surgical tactics, and surgical treatment of vascular diseases. Particular attention is paid to atypical forms of the disease, clinical manifestations, diagnostic testing, and treatment strategies in patients of different age groups.	GPC-7 PC-2 PC-3
4	Endocrine surgery	Study of the etiology, pathogenesis, clinical presentation, diagnosis and differential diagnosis, principles of surgical tactics, and surgical treatment of thyroid and parathyroid diseases. Particular attention is paid to atypical forms of disease progression, clinical manifestations, diagnostic testing, and treatment strategies in patients of different age groups.	GPC-7 PC-2 PC-3

## 5.2.Lecture plan

### Semester 9

№	Title of the course section	Lecture topics	Active learning methods	Workload (academic hours)
1.	Surgical diseases of the vessels	Lec.1 Angiology and Vascular Surgery. Trauma of the Great Vessels	-	2
2.		Lec.2 Acute Thrombosis and Embolism of the Aorta and Great Arteries. Treatment of Acute Arterial Obstruction	-	2
3.		Lec. 3 Chronic Diseases of the Aorta and Its Branches	-	2
4.		Lec.4 Aneurysms of the Aorta and Great Vessels	-	2
5.		Lec.5 Fundamentals of Phlebology and Lymphology. Venous Diseases	-	2
6.	Surgical diseases of the chest organs, lungs, pleura, and mediastinum	Lec.6 Fundamentals of Thoracic Surgery. Diaphragm Diseases and Surgery	-	2
7.		Lec.7 Mediastinal Tumors and Cysts	-	2
8.		Lec.8 Acute and Chronic Mediastinitis	-	2

9.		Lec.9 Thoracic Surgery Emergencies	-	2
10.		Lec.10 Chest trauma	-	2
11.		Lec.11 Suppurative Diseases of the Lungs and Pleura	-	2
12.		Lec.12 Breast diseases	-	2
13.	Surgical diseases of the digestive organs, abdominal cavity, and abdominal wall	Lec.13 Esophagus Diseases	-	2
14.		Lec.14 Surgical Treatment of Gastric Tumors	-	2
15.		Lec.15 Gastrointestinal and Hepatoduodenal Fistulas	-	2
16.		Lec.16 Minimally Invasive Surgery	-	2
17.		Lec.17 Diagnosis and Surgical Treatment of Acute Pancreatitis	-	2
18.		Lec.18 Diagnosis and Surgical Treatment of Chronic Pancreatitis	-	2
Total:				36

### Semester 10

№	Title of the course section	Lecture topics	Active learning methods	Workload (academic hours)
1	Surgical diseases of the digestive organs, abdominal cavity, and abdominal wall	Lec.1 Current State of the Problem of Surgical Treatment of Peptic Ulcer Complications and Modern Approaches to the Treatment of Acute Gastrointestinal Bleeding	-	4
2		Lec.2 Liver Cirrhosis. Portal Hypertension. Surgical Treatment	-	4
3		Lec.3 Parasitic Liver Diseases and Their Surgical Treatment	-	4
4		Lec.4 Complications of Gallstone Disease	-	4
5		Lec.5 Differential Diagnosis of Obstructive Jaundice	-	4
6		Lec.6 Surgical Treatment of Non-Neoplastic Diseases of the Colon	-	4
7		Lec.7 Surgical Treatment of Colon Cancer	-	2
8		Lec.8 Current Issues in the Diagnosis and Treatment of Acute Intestinal Obstruction	-	2
9	Endocrine surgery	Lec.9 Thyroid Diseases. Surgical Treatment	-	2
10		Lec.10 Malignant Neoplasms of the Thyroid Gland	-	2
11		Lec.11 Hypercalcemic Syndrome	-	2
12		Lec.12 Extra-Organ Tumors of the Neck	-	2
Total:				36

### 5.3. Practical classes plan Semester 9

No	Title of the course section	Practical class topic	Active learning methods	Assessment	Workload (academic hours)
1	Surgical diseases of the vessels	PC 1 Introduction to Angiology and Vascular Surgery. Principles and methods of examining patients with angiology and vascular surgery. Acute arterial obstruction. Clinical presentation, diagnosis, and treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
2		PC 2 Aneurysms of the Aorta and Main Arteries. Clinical presentation, diagnosis, and treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
3		PC 3 Chronic Diseases of the Aorta and Its Branches. Classification, clinical presentation, diagnosis, and treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
4		PC 4 Fundamentals of Phlebology and Lymphology. Acute and Chronic Venous Diseases. Classification, clinical presentation, diagnosis, and treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
5	Surgical diseases of the chest organs, lungs, pleura, and mediastinum	PC 5 Introduction to Thoracic Surgery. Examination methods in thoracic surgery. Diagnostic methods and principles of surgical interventions on the chest organs. Chest Trauma. Classification, clinical presentation, diagnosis, and treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
6		PC 6 Emergencies in Thoracic Surgery (pneumothorax, pulmonary hemorrhage,	Case analysis, group discussion	Tests, cases, academic case history, clinical case	4

		foreign bodies in the respiratory tract).		presentation	
7		PC 7 Acute infectious destruction of the lungs. Classification, clinical presentation, diagnosis, and treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
8		PC 8 Chronic suppurative diseases of the lungs and pleura. Classification, clinical presentation, diagnosis, and treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
9		PC 9 Lung tumors. Diagnostic and treatment strategies. Differential diagnosis of focal lung diseases.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
10		PC 10 Mediastinal tumors and cysts. Classification, clinical presentation, diagnosis, and treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
11		PC 11 Acute and chronic mediastinitis. Compressive pericarditis.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
12		PC 12 Breast diseases	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
13	Surgical diseases of the digestive organs, abdominal cavity, and abdominal wall	PC 13 Esophageal diseases. Classification, clinical presentation, diagnosis, and treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
14		PC 14 Modern Approaches to Surgical Treatment of Peptic Ulcers and Their Complications	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
15		PC 15 Modern Methods of Diagnostics and Differential Diagnosis and Treatment of Gastrointestinal Bleeding	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
16		PC 16	Case	Tests, cases,	2

		Hollow Organ Perforation. Peritonitis. Diagnosis, Differential Diagnosis, and Surgical Tactics	analysis, group discussion	academic case history, clinical case presentation	
17		PC 17 Diagnosis and Surgical Treatment of Gastric Tumors	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	2
18		PC 18 Diseases of the Operated Stomach	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	2
19		PC 19 Errors and Dangers in Modern Treatment of Hernias and Their Complications	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	2
20		PC 20 Errors, Dangers, and Complications of Acute Appendicitis	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	2
21		PC 21 Acute Abdomen. Classification, Clinical Presentation, Diagnosis, and Treatment	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	2
Total:					72

### Semester 10

No	Title of the course section	Practical class topic	Active learning methods	Assessment	Workload (academic hours)
1	Surgical diseases of the digestive organs, abdominal cavity, and abdominal wall	PC 1 Acute Pancreatitis. Classification, Clinical Presentation, Diagnosis, and Treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
2		PC 2 Chronic Pancreatitis. Classification, Clinical Presentation, Diagnosis, and Treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
3		PC 3 Complications of Gallstone Disease. Classification, Clinical Presentation, Diagnosis,	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4

		and Treatment.			
4		PC 4 Acute Cholecystitis. Complications, Diagnosis, Differential Diagnosis, and Treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
5		PC 5 Differential Diagnosis of Obstructive Jaundice and Its Surgical Treatment.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
6		PC 6 Cholangitis. Postcholecystectomy Syndrome	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
7		PC 7 Colon Tumors. Clinical Presentation, Diagnosis, Differential Diagnosis, and Surgical Approach.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
8		PC 8 Rectal Tumors. Clinical Presentation, Diagnosis, Differential Diagnosis, and Surgical Approach.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
9		PC 9 Non-neoplastic diseases of the colon (inflammatory diseases, diverticular disease, fistulas, Hirschsprung's disease)	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
10		PC 10 Hemorrhoids (differential diagnosis, modern treatment methods). Rectal prolapse.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
11		PC 11 Acute and chronic paraproctitis.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
12		PC 12 Diagnosis and treatment of acute intestinal obstruction	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
13		PC 13 Adhesive disease.	Case analysis, group	Tests, cases, academic case history,	4

			discussion	clinical case presentation	
14		PC 14 Minimally invasive surgery. Iatrogenesis in surgical practice	Case analysis, group discussion	Tests, cases	4
15	Endocrine surgery	PC 15 Surgical treatment of thyroid diseases.	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
16		PC 16 Malignant neoplasms of the thyroid gland	Case analysis, group discussion	Tests, cases, academic case history, clinical case presentation	4
17		PC 17 Urgent surgical diseases in outpatient practice	Case analysis, group discussion	Tests, cases	4
18		PC 18 Final lesson. Discussion of the Clinical presentation of the patient. Discussion of course works.	Case analysis, group discussion	Tests, cases	4
Total:					72

#### 5.4 Seminars are not included in the course

#### 5.5 Laboratory classes are not included in the course

#### 5.6 Self-study

№	Title of the course section	Types of self-study	Assessment	Workload (academic hours)
	Surgical diseases of the digestive organs, abdominal cavity, and abdominal wall	Working with lecture materials, working with academic literature, preparation of course work	Oral interview based on control questions; completion of tests; solving cases; preparation of an academic case history; preparation of a 'Clinical case presentation'; course work	37
	Surgical diseases of the chest organs, lungs, pleura and mediastinum	Working with lecture materials, working with academic literature, preparation of	Oral interview based on control questions; completion of tests; solving cases; preparation of an academic case history;	27

		course work	preparation of a 'Clinical case presentation'; course work	
	Surgical diseases of the vessels	Working with lecture materials, working with academic literature, preparation of course work	Oral interview based on control questions; completion of tests; solving cases; preparation of an academic case history; preparation of a 'Clinical case presentation'; course work	27
	Endocrine surgery	Working with lecture materials, working with academic literature, preparation of course work	Oral interview based on control questions; completion of tests; solving cases; preparation of an academic case history; preparation of a 'Clinical case presentation'; course work	17
Total:				108
Examination preparation:				32

### 5.3.1. Course work topics:

1. Modern Surgical Treatment of Hernias Using Mesh Endoprostheses: Traditional and Endovideosurgical Approaches
2. Modern Approaches to the Treatment of Complications of Peptic Ulcer Disease (Surgical and Endoscopic Methods)
3. Modern Diagnostic Methods and Treatment Challenges in Complicated Forms of Pancreatitis: Risk Factors and Surgical Tactics
4. Injuries and Posttraumatic Strictures of the Bile Ducts
5. Iatrogenic Injuries in Surgical Practice
6. The Problem of Gastrointestinal Bleeding in Physician's Practice
7. Surgical Treatment of Non-Neoplastic Diseases of the Colon: Problems and Prospects
8. Modern Diagnostic Methods for Acute Abdomen
9. New Directions in Thyroid Surgery
10. Modern Endovideosurgery: Problems and Prospects
11. Deontology and Ethics in the Work of a Surgeon in Modern Society
12. Postoperative Complications: Current Diagnostic and Corrective Options
13. The Importance of the Physician's Personality in the Treatment of Surgical Patients
14. Outpatient Surgical Care
15. Organization of Emergency Surgical Care at the Prehospital Stage
16. Diagnosis of Acute Surgical Diseases in Outpatient Practice in a Polyclinic
17. Postoperative Management in Outpatient Settings
18. Asepsis and Antiseptics in the Practice of an Outpatient Surgeon
19. Modern Methods of Diagnosing Surgical Diseases
20. Minimally Invasive Treatments for Surgical Diseases of the Abdominal and Chest Organs and Cardiovascular Diseases
21. Current Problems in the Diagnosis and Treatment of Acute Pancreatitis
22. Laparoscopic Technologies in the Diagnosis of Acute Abdomen
23. Robots in Modern Surgery

24. New Technologies in Modern Surgery. The da Vinci Robot
25. Diagnostic and Operative Laparoscopy in Elective and Emergency Surgery
26. Angioplasty of Leg Arteries and Methods for Determining Microhemodynamics
27. Varicose Veins of the Lower Extremities
28. Lung Cancer
29. Anal Fissure
30. Intra-abdominal Hypertension Syndrome
31. Bowel Decompression Methods
32. Surgical Treatment of Peptic Ulcer
33. Rib Fractures: Surgical Tactics and Treatment Principles
34. Mediastinal Cysts: Treatment Principles
35. Liver Abscesses: Treatment Principles and Methods
36. Mechanical Jaundice: Principles of Preoperative Preparation and Intensive Care in the Postoperative Period
37. Surgical Aspects of Spleen Pathology in Hematological Diseases (Werlhof's Disease, Hereditary Hemolytic Anemias, Chronic Leukemia, Lymphogranulomatosis)
38. Clinical Features and Diagnosis of Spleen Diseases. Splenomegaly and Hypersplenism
39. Postoperative Ventral Hernias: Modern Principles and Methods of Surgical Treatment
40. Intestinal Fistulas: Principles of Conservative and Surgical Treatment
41. Acute Disorders of Mesenteric Circulation
42. Aneurysms of the Thoracic and Abdominal Aorta
43. Dissecting Aneurysm of the Thoracic and Abdominal Aorta
44. Examination Methods in Thoracic Surgery (Clinical, Instrumental)
45. Modern Instrumental Diagnostic Methods for Lung and Pleural Diseases
46. Modern Instrumental Diagnostic Methods for Diseases of the Mediastinal Organs
47. Diaphragm Diseases: Clinical Presentation, Diagnosis, and Treatment
48. Chest Trauma: Classification
49. Chest Trauma: Clinical Manifestations
50. Chest Trauma: First Aid and Prehospital Physician Tactics
51. Chest Trauma: Differential Diagnosis
52. Chest Trauma: Methods of Fixation of the Thoracic Skeletal Framework
53. Principles of Chest Injury Treatment
54. Restoration of Respiratory Failure in Penetrating Chest Wounds
55. Surgical Approaches in Chest Surgery. Possibilities of Thoracoscopy
56. Classification and Clinical Manifestations of Pneumothorax
57. Tension Pneumothorax: Clinical Features, Diagnosis, Treatment
58. Hemothorax: Clinical Features, Diagnosis, Treatment
59. Pulmonary Hemorrhage: Causes, Clinical Features, Diagnosis
60. Differential Diagnosis of Pulmonary Hemorrhage
61. Emphysema: Causes, Diagnosis
62. Foreign Bodies in the Respiratory Tract: Diagnosis, First Aid
63. Foreign Bodies in the Respiratory Tract: Late Complications, Diagnosis and Treatment
64. Acute Infectious Destruction of the Lungs
65. Lung Abscesses: Clinical Features, Diagnosis, Treatment Principles
66. Gangrenous Abscess: Clinical Features, Diagnosis, Treatment Principles
67. Pulmonary Gangrene: Clinical Features, Diagnosis, Treatment Principles
68. Pleural Empyema: Classification, Diagnosis
69. Pleural Empyema: Principles of Conservative and Surgical Treatment
70. Bronchiectasis: Clinical Features, Classification, Indications for Surgical Treatment
71. Chronic Suppurative Lung Diseases: Classification
72. Focal Lung Diseases: Classification, Diagnosis, Differential Diagnosis
73. Surgical Treatment of Focal Lung Diseases

74. Tumors and Cysts of the Mediastinum: Classification, Diagnosis, Differential Diagnosis
75. Mediastinal Tumors and Cysts: Treatment Principles
76. Clinical Presentation and Diagnosis of Diffuse Toxic Goiter. Indications for Surgical Treatment
77. Principles and Features of Surgical Treatment of Diffuse Toxic Goiter
78. Nodular Goiter: Clinical Manifestations, Diagnosis, Differential Diagnosis, and Indications for Surgical Treatment
79. Complications of Surgical Treatment of Goiter: Diagnosis, Clinical Manifestations, and Principles of Correction
80. Thyroid Cancer: Diagnosis, Surgical Treatment
81. Benign Breast Diseases: Classification, Differential Diagnosis, Clinical Presentation, and Treatment
82. Breast Cancer: Classification, Clinical Diagnosis (Symptoms, Examination Principles)
83. Breast Cancer: Clinical Manifestations, Differential Diagnosis, Diagnostic Methods
84. Breast Cancer: Surgical Treatment (Extent, Surgical Options)
85. Acute Pancreatitis: Classification, Diagnostic Methods
86. Acute Pancreatitis: Clinical Manifestations, Symptoms, Differential Diagnosis
87. Acute Pancreatitis: Conservative Therapy
88. Acute Pancreatitis: Indications for Surgery, Principles of Surgical Treatment
89. Complications of Acute Pancreatitis: Classification, Clinical Manifestations
90. Complications of Acute Pancreatitis: Diagnosis, Treatment Methods
91. Chronic Pancreatitis: Classification, Diagnostic Methods
92. Chronic Pancreatitis: Clinical Manifestations, Symptoms, Differential Diagnosis
93. Chronic Pancreatitis: Indications for Surgery, Principles of Surgical Treatment
94. Achalasia of the Cardia: Etiology, Clinical Manifestations
95. Achalasia of the Cardia: Diagnosis, Differential Diagnosis
96. Achalasia of the Cardia: Conservative Therapy, Indications for Surgery
97. Achalasia of the Cardia: Surgical Treatment
98. Esophageal Burns: Classification, Clinical Manifestations, First Aid
99. Esophageal Burns: Treatment Principles
100. Esophageal Diverticula: Etiology, Classification, Symptoms
101. Esophageal Diverticula: Clinical Manifestations, Diagnosis
102. Esophageal Diverticula: Treatment Principles
103. Esophageal Cancer: Clinical Features, Diagnosis
104. Esophageal Cancer: Treatment Principles (Surgical Interventions)
105. Diseases of the Operated Stomach: Classification, Diagnostic Methods
106. Afferent Loop Syndrome: Causes, Clinical Features, Treatment
107. Dumping Syndrome: Classification, Causes, Clinical Features, Treatment
108. Complications of Cholelithiasis: Types, Diagnostic Methods
109. Acute Cholecystitis: Causes, Clinical Features, Treatment
110. Dropsy and Empyema of the Gallbladder: Causes, Clinical Features, Diagnosis, Treatment
111. Choledocholithiasis: Causes, Clinical Features, Diagnosis, Treatment
112. Obstructive Jaundice: Causes, Differential Diagnosis
113. Cholangitis: Causes, Clinical Features, Diagnosis, Treatment
114. Gastrointestinal Bleeding: Causes, Clinical Features, Diagnosis
115. Gastrointestinal Bleeding: Treatment Principles
116. Endoscopic Methods for Control of Gastrointestinal Bleeding

## **6. Methodological guidelines for students on mastering the course**

For effective mastery of the course sections, students are required to independently study educational and methodological materials, including those posted in ELS MOODLE as well as materials published by the department; complete testing on all proposed topics; actively participate in discussions and patient case analysis during practical classes; take part in clinical case discussions, professor and associate professor ward rounds; and attend surgical procedures and dressing changes.

Students are also required to prepare an academic case history and a Clinical Case Presentation and defend them during an oral interview with the instructor. If necessary, students may obtain consultative assistance from the instructor.

When working on course work, students should select the required literature from the university library or other sources, analyze the material, identify key concepts, and prepare the course work in accordance with the established requirements. For the defense of the course work, students must prepare a brief presentation on the topic and present it during a practical class.

For successful completion of the interim assessment in the form of an examination, students must study and work through all assessment materials, including oral interview questions and cases.

## **7. Assessment materials**

Assessment materials for the course used for ongoing assessment and interim assessment of students include examples of assessment methods (Annex A to the Course Syllabus), as well as the assessment procedure and evaluation criteria.

## **8. List of academic literature and Internet resources required for mastering the course**

### **8.1. Academic literature:**

1. Surgical Diseases [Electronic resource]: textbook / edited by M. I. Kuzin. – 4th ed., revised and expanded. – Moscow: GEOTAR-Media, 2014. – Available at: <http://www.studmedlib.ru/book/ISBN9785970433713.html>
2. Kuzin, M. I. Surgical Diseases [Electronic resource]: textbook / edited by M. I. Kuzin. – 4th ed., revised and expanded. – Moscow: GEOTAR-Media, 2017. – 992 p., ill. – ISBN 978-5-9704-4646-1. – Available at: <http://www.studmedlib.ru/book/ISBN9785970446461.html>
3. Surgical Diseases. In 2 volumes. Vol. 1 [Electronic resource]: textbook / edited by V. S. Saveliev, A. I. Kirienko. – 2nd ed., revised and expanded. – Moscow: GEOTAR-Media, 2014. – Available at: <http://www.studmedlib.ru/book/ISBN9785970431313.htm>
4. Saveliev, V. S. Surgical Diseases. In 2 volumes. Vol. 1 [Electronic resource]: textbook / edited by V. S. Saveliev, A. I. Kirienko. – 2nd ed., revised and expanded. – Moscow: GEOTAR-Media, 2017. – 720 p. – ISBN 978-5-9704-3998-2. – Available at: <http://www.studmedlib.ru/book/ISBN9785970439982.html>
5. Surgical Diseases: textbook for medical universities with a compact disc. In 2 volumes. Vol. 1 / M. M. Abakumov, V. V. Andriyashkin, A. N. Bletkin et al.; edited by V. S. Saveliev, A. I. Kirienko. – Moscow: GEOTAR-Media, 2005. – 601 p

### **8.2. Internet resources**

Name	Available at
Journal of medical Internet research	<a href="http://www.jmir.org">http://www.jmir.org</a>
Russian medical portal	<a href="http://www.rosmedportal.com">http://www.rosmedportal.com</a>

## **9. List of information technologies used for mastering the discipline, including a list of software, professional databases and information reference systems**

**9.1. List of information technologies applied in the course delivery:**

№	Title of the course section	Information technologies
	<p>Surgical diseases of the digestive organs, abdominal cavity, and abdominal wall</p> <p>Surgical diseases of the chest organs, lungs, pleura, and mediastinum</p> <p>Surgical diseases of the vessels</p> <p>Endocrine surgery</p>	<p>course materials in the Electronic Information and Educational Environment of the North-Western State Medical University named after I.I. Mechnikov of the Ministry of Health of the Russian</p> <p><a href="https://moodle.szgmu.ru/course/view.php?id=48">https://moodle.szgmu.ru/course/view.php?id=48</a></p>

**9.2. List of software used for course delivery (*licensed and freely distributed software, including domestically produced software*):**

№	Software name	License term	Documents confirming the right to use software products
<b>Licensed software</b>			
1.	ESET NOD 32	1 year	State contract № 07/2020
2.	MS Windows 8 MS Windows 8.1 MS Windows 10 MS Windows Server 2012 Datacenter - 2 Proc MS Windows Server 2012 R2 Datacenter - 2 Proc MS Windows Server 2016 Datacenter Core	Unlimited	State contract № 30/2013-O; State contract № 399/2013-OA; State contract № 07/2017-ЭА.
3.	MS Office 2010 MS Office 2013	Unlimited	State contract № 30/2013-OA; State contract № 399/2013-OA.
4.	Academic LabVIEW Premium Suite (1 User)	Unlimited	State contract № 02/2015
<b>Licensed domestically produced software</b>			
1.	Antiplagiat	1 year	State contract № 2409
2.	«WEBINAR» Version 3.0	1 year	Contract № 347/2020-M
3.	« E-learning environment 3KL»	1 year	Contract № 348/2020-M
4.	TrueConf Enterprise	1 year	Contract № 396/2020-ЭА
<b>Freely distributed software</b>			
1.	Google Chrome	Unlimited	Open License Agreement GNU GeneralPublicLicense

2.	NVDA	Unlimited	Open License Agreement GNU GeneralPublicLicense
Freely distributed software of domestic production			
1.	Moodle	Unlimited	Open License Agreement GNU GeneralPublicLicense

### 9.3. List of professional databases and information reference systems

№	Software name	License term	Documents confirming the right to use software products	Accessibility for students with disabilities and individuals with limited health capabilities
1.	Consultant Plus	1 year	Contract № 655/2020-ЭА	-
2.	ELS «Konsultant studenta»	1 year	Contract № 307/2020-ЭА	<a href="http://www.studmedlib.ru/">http://www.studmedlib.ru/</a>
3.	EMD «Konsultant vracha»	1 year	Contract № 281/2020-ЭА	<a href="http://www.rosmedlib.ru/">http://www.rosmedlib.ru/</a>
4.	ELS «ibooks.ru»	1 year	Contract № 06/2020	<a href="https://ibooks.ru">https://ibooks.ru</a>
5.	ELS «IPRBooks»	1 year	Contract № 08/2020-3K	<a href="http://www.iprbookshop.ru/special">http://www.iprbookshop.ru/special</a>
6.	ELS «Bookup»	1 year	Contract № 05/2020	<a href="https://www.books-up.ru/">https://www.books-up.ru/</a>
7.	ELS «Lan' Publishing»	1 year	Contract № 395/2020-ЭА	<a href="https://e.lanbook.com/">https://e.lanbook.com/</a>

## 10. Material and Technical Support for the Course

Classrooms for lecture-type classes, group and individual consultations, ongoing monitoring of academic performance and midterm assessment of students, equipped with equipment and technical teaching aids: St. Petersburg, Piskarevsky Prospekt, 47, lit B (building 2/4), F (building 5), BV (building 6), D (building 8), R (buildings 9, 11 and 13, 15), I (building 12, 12a, 14), P (building 17), L (building 18), O (building 19), N (building 21), Zh (building 23), Shch (building 24), Yu (building 25), AL (building 26), AE (building 32), AZ (building 33), AK (building 39), AO (building 40).

Equipment: chalkboard; teacher's desk; four-seater student desk;

Technical teaching aids: multimedia projector, teacher's laptop, system unit, monitor.

Specialized technical teaching aids: Roger Pen (Roger Pen-shaped personal wireless transmitter), Roger MyLink (Roger Pen signal receiver) (for students with hearing impairments); IntelliKeys (wired keyboard with Russian Braille and a matte black finish). (St. Petersburg, Piskarevsky Prospekt, 47, Lit R (Bldg. 9), Rooms 18 and 19, Mechnikov North-Western State Medical University, Ministry of Health of the Russian Federation).

Classrooms for seminar-type classes, group and individual consultations, ongoing progress monitoring, and midterm assessments of students, equipped with equipment and technical teaching aids: St. Petersburg, Piskarevsky Prospekt, 47, Building 13.

Equipment: teacher's desks, four-seater student desks, chairs;

Technical teaching aids: multimedia projector, teacher's laptop, Peter the Great Hospital (Surgical Department No. 1 and Oncology Department).

City Clinical Oncology Dispensary (Agreement No. 277/2019-OPP dated March 15, 2019)

Student study areas equipped with computers and internet access and access to the University's electronic information and educational environment: St. Petersburg, Piskarevsky

Prospekt, 47, Building AE (Building 32), Room No. 1, lit. R (building 9), room No. 18,19  
FGBOU VO I.I. Mechnikov North-Western State Medical University of the Ministry of  
Health of the Russian Federation.

## **Annex A**

Ministry of Health of the Russian Federation

**Federal State Budgetary Educational Institution  
of Higher Education  
North-Western State Medical University  
named after I.I. Mechnikov  
of the Ministry of Health of the Russian Federation**

(North-Western State Medical University named after I.I. Mechnikov,  
Ministry of Health of the Russian Federation)

### **ASSESSMENT MATERIALS**

(for ongoing assessment and interim assessment of students)

**Specialty:** 31.05.01 General Medicine

**Specialization:** Organization and provision of primary health care to the adult population in medical organizations

**Language of instruction:** Russian, English

**Name if the course:** Clinical surgery

## 1. List of planned learning outcomes

Code of the competence achievement indicator	Learning outcomes (Assessment criteria)	Assessment methods
<b>Indicator 1 GPC-7.1</b>	<p><b>Knows:</b>            the etiology and pathogenesis of surgical diseases;            the impact of environmental factors, nutrition, lifestyle, and violations of sanitary and hygienic standards on the occurrence of surgical diseases and the development of their complications;            the clinical presentation and features of the course of surgical diseases and their complications in different age groups;            complications of other diseases requiring surgical intervention;            indications for emergency hospitalization depending on the development of acute complications of surgical diseases;            methods of conservative treatment and prevention of surgical diseases.</p> <p><b>Able to:</b>            assess the severity of a surgical patient's condition based on data obtained from history taking, inspection, and physical examination; interpret the results of laboratory and instrumental investigations.</p> <p><b>Has skills:</b>            of taking medical history, interviewing the patient, and interpreting laboratory and instrumental investigation data in order to determine the severity of the patient's condition and further treatment tactics.</p>	Tests Control questions Cases Academic case history Clinical case presentation Course work
<b>Indicator 2 GPC-7.2</b>	<p><b>Knows:</b>            the principles of conservative treatment; indications and contraindications for the use of medications in surgical patients with various nosological entities, taking into account the effects of medications on the course of the pathological process;            indications for pharmacotherapy in surgical patients depending on their condition, stage of treatment, and the nature of disease progression;            methods of drug administration and selection of the most rational route of administration depending on the condition of surgical patients and the stage of treatment.</p> <p><b>Able to:</b>            develop a plan for conservative pharmacological therapy in a surgical patient depending on the patient's condition, stage of treatment, and the development of complications of the underlying disease or the postoperative period.</p> <p><b>Has skills:</b></p>	Tests Control questions Cases Academic case history Clinical case presentation Course work

	of planning and prescribing conservative pharmacological therapy for surgical patients depending on the nosological entity.	
<b>Indicator 3 GPC-7.3</b>	<b>Knows:</b> the principles of conservative treatment; indications and contraindications for the use of medications in surgical patients with various nosological entities, taking into account the effects of medications on the course of the pathological process; the action of different groups of medications, as well as adverse effects associated with their use; clinical manifestations of adverse effects and complications resulting from the use of medications in surgical patients.	Tests Control questions Cases Academic case history Clinical case presentation Course work
	<b>Able to:</b> identify adverse side effects and complications resulting from the use of medications in surgical patients; correct negative effects of medications by discontinuing them or replacing them with drugs from another pharmacological group.	
	<b>Has skills:</b> of planning treatment tactics and prescribing conservative pharmacological therapy for surgical patients depending on the nosological phenomenon.	
<b>Indicator 4 GPC-7.4</b>	<b>Knows:</b> the principles of management of surgical patients, including conservative and pharmacological therapy as well as operative surgical treatment, taking into account the impact of various treatment modalities on the course of the pathological process; possible complications and adverse effects associated with different types of treatment of surgical patients, depending on the nosological entity, stage of the disease, clinical course, patient's condition, and the presence of comorbidities.	Tests Control questions Cases Academic case history Clinical case presentation Course work
	<b>Able to:</b> assess the condition of a surgical patient in the preoperative and postoperative periods; identify complications and determine their severity in the preoperative and postoperative periods.	
	<b>Has skills:</b> of performing patient examination and interpreting laboratory and instrumental investigation data at various stages of treatment of surgical patients.	
<b>Indicator 1 PC-2.1</b>	<b>Knows:</b> the etiology and pathogenesis of surgical diseases; factors related to the environment, nutrition, and lifestyle that influence the development of surgical diseases and their complications; the clinical presentation and features of the course of surgical diseases in different age groups;	Tests Control questions Cases Academic case history Clinical case

	<p>methods of collecting chief complaints and medical history in patients with surgical diseases; clinical manifestations of major surgical syndromes (peritonitis and inflammatory diseases of the abdominal organs, gastrointestinal bleeding, intestinal obstruction, pneumothorax, etc.); features and clinical manifestations of complications of surgical diseases.</p> <p><b>Able to:</b> take medical history, interview a surgical patient, and perform physical examination (inspection, palpation, auscultation, blood pressure measurement, assessment of arterial pulse characteristics); perform superficial and deep abdominal palpation, auscultation of the abdominal cavity and identify pathological sounds; identify signs and symptoms of major surgical diseases and their complications.</p> <p><b>Has skills:</b> of taking medical history, interviewing, and examining the patient.</p>	<p>presentation Course work</p>
<p><b>Indicator 2 PC-2.2</b></p>	<p><b>Knows:</b> the clinical manifestations of major surgical diseases and principles of their differential diagnosis; nosological principles for the classification of surgical diseases; principles of the International Classification of Diseases (ICD); laboratory and instrumental diagnostic methods for surgical diseases, including indications, contraindications, and techniques for performing imaging, endoscopic, morphological, and laboratory investigations in surgical patients.</p> <p><b>Able to:</b> navigate the main classifications of surgical diseases; formulate a preliminary diagnosis; determine the scope of additional investigations required to specify the diagnosis; perform differential diagnosis of surgical diseases based on clinical, laboratory, and instrumental data; interpret the results of imaging studies, biochemical analyses of human biological fluids, as well as other laboratory and instrumental diagnostic methods.</p> <p><b>Has skills:</b> of using medical and anatomical conceptual frameworks and specialized terminology (in Russian, Latin, and Greek); of developing an examination plan for a surgical patient for the purpose of differential diagnosis; of correlating morphological and clinical manifestations of surgical diseases for differential diagnosis; of formulating a preliminary diagnosis based on the results of laboratory and instrumental investigations.</p>	<p>Tests Control questions Cases Academic case history Clinical case presentation Course work</p>

<p><b>Indicator 1 PC-3.1</b></p>	<p><b>Knows:</b>  the clinical manifestations of major surgical diseases, their specific features, and possible complications in different age groups, as well as principles of their differential diagnosis based on clinical and laboratory-instrumental investigations;  the basic principles, indications, and contraindications for conservative treatment of surgical diseases, taking into account the effects of medications on the course of the pathological process;  indications and contraindications for operative treatment of surgical diseases.</p> <p><b>Able to:</b>  substantiate the principles of pathogenetic therapy in surgical diseases in the preoperative and postoperative periods;  develop an action plan for surgical patients, taking into account the course of the disease;  formulate indications for the selected treatment method with regard to the clinical presentation and specific features of the disease course in surgical patients;  justify pharmacotherapy for a particular surgical patient, taking into account the course of the disease and the presence or absence of complications in the preoperative and postoperative periods;  determine indications for operative surgical treatment.</p> <p><b>Has skills:</b>  of planning treatment tactics for surgical patients with a typical course of the disease.</p>	<p>Tests  Control questions  Cases  Academic case history  Clinical case presentation  Course work</p>
<p><b>Indicator 2 PC-3.2</b></p>	<p><b>Knows:</b>  the basic principles, indications, and contraindications for conservative treatment of surgical diseases, taking into account the effects of medications on the course of the pathological process;  the rational selection of specific medications for the treatment of major pathological syndromes, diseases, and emergency conditions in surgical patients.</p> <p><b>Able to:</b>  determine the route of administration, regimen, and dosage of medications; assess the effectiveness and safety of the administered treatment based on monitoring the clinical course of a surgical disease;  apply various routes of medication administration.</p> <p><b>Has skills:</b>  of prescribing medications and monitoring their effectiveness when using conservative methods for the treatment and prevention of surgical diseases.</p>	<p>Tests  Control questions  Cases  Academic case history  Clinical case presentation</p>

**2. Examples of assessment methods and evaluation criteria for conducting ongoing assessment**

## 2.1. Examples of input test

Questions:

- 1) Anatomical features of the biliary tract (Anatomy)
- 2) Changes in blood biochemistry in acute pancreatitis (Pathological physiology, Laboratory diagnostics)
- 3) Complications associated with NSAID use (Pharmacology)
- 4) Radiographic signs of pneumothorax (Radiological diagnostics)
- 5) Morphological differences between abscesses and phlegmons (Pathological anatomy)

Evaluation criteria, Pass/Fail grading system

Grade	Description
pass	Full understanding of the problem; all assignment requirements met.
fail	Lack of understanding of the problem; many assignment requirements not met; no response.

## 2.2. Test examples:

### Indicator 1 GPC-7.1

#### Question Title: Question 1

**For ileofemoral venous thrombosis in pregnant women, it is necessary to:**

- 1) hospitalize the patient in a maternity hospital
- 2) administer conservative therapy at home
- 3) determine the nature of treatment after determining the prothrombin index in an outpatient setting
- 4) **hospitalize the patient in the vascular department**

### Indicator 2 GPC-7.2

#### Question Title: Question 2

**Conservative treatment of appendiceal infiltrate with antibiotics is performed:**

- 1) up to 5 days of illness without abscess formation
- 2) more than 5 days of illness without abscess formation
- 3) more than 5 days of illness with abscess formation
- 4) **at any stage of the illness**

### Indicator 3 GPC-7.3

#### Question Title: Question 3

**The main pathogenetic treatment for acute pancreatitis is:**

- 1) administration of cytostatics
- 2) **suppression of pancreatic secretory function**
- 3) elimination of hypovolemia
- 4) nasogastric decompression of the gastrointestinal tract

### Indicator 4 GPC-7.4.

#### Question Title: Question 4

**Conservative treatment of ulcerative bleeding includes all of the following except:**

- 1) endoscopic coagulation of the vessel
- 2) intravenous administration of calcium chloride and aminocaproic acid
- 3) **administration of diuretics**

4) administration of Vikasol

**Indicator 1 PC-2.1,**

**Question Title: Question 5**

**Complaints not typical of subclavian axillary venous thrombosis:**

- 1) arm fatigue during work
- 2) arm swelling
- 3) cyanosis of the skin of the forearm and shoulder
- 4) decreased radial artery pulse

**Indicator 2 PC-2.2**

**Question Title: Question 6**

**A diagnosis of stomach cancer is confirmed by testing:**

- 1) blood
- 2) stool for occult blood
- 3) gastric contents using a 'protein chain'
- 4) **X-ray examination**

**Indicator 3 PC-2.3**

**Question Title: Question 7**

**If a family physician suspects stomach cancer, they should refer the patient to:**

- 1) a general practitioner
- 2) a gastroenterologist
- 3) a surgeon
- 4) **an oncologist**

**Indicator 4 PC-2.4**

**Question Title: Question 8**

**The differential diagnosis between acute venous and arterial thrombosis takes into account:**

- 1) the nature of the edema
- 2) skin color
- 3) the condition of the superficial veins
- 4) **all of the above**

**Indicator 5 PC-2.5**

A 56-year-old patient presented with severe weakness and intermittently increasing aching abdominal pain. He had not had a bowel movement for three days, and was passing gas. His condition was moderate, with pale skin and decreased turgor. His abdomen was asymmetrical, with a protruding upper abdomen that assisted breathing. A 7 x 6 cm tumor-like mass was palpable at the level of the umbilicus. It was dense, movable, and moderately painful. A rectal examination revealed a nodular mass in the perirectal tissue. X-ray and endoscopic examination revealed gastric cancer. The intestinal mucosa was normal. The disease was staged according to TNM.

1. T1 N0 M-
2. T2 N2 M+
3. **T4 N3 M+**
4. T2 N3 M+

**Question Title: Question 9**

**The classification of diseases of the operated stomach distinguishes the following groups of diseases:**

- 1) **functional, mechanical (technical), organic**
- 2) functional, mechanical (technical), organic, mixed
- 3) organic, mixed, somatic
- 4) all correct

**Indicator 1 PC-3.1**

**Question Title: Question 10**

**The most effective means of preventing the progression of varicose veins is:**

- 1) **elastic compression of the limb**
- 2) comprehensive physiotherapy treatment
- 3) limiting heavy physical activity
- 4) combination therapy with vasoprotectors

**Indicator 2 PC-3.2**

**Question Title: Question 11**

**Removal of forgotten common bile duct stones through a T-shaped drainage is most successful with the use of**

- 1) warfarin
- 2) bile acids
- 3) protamine
- 4) **ureteral basket**

Evaluation criteria, test assessment scale

Grade		Description
«excellent»	5	completed in full – 90%-100%
«good»	4	not completed in full – 80%-89%
«satisfactory»	3	completed with deviation – 70%-79%
«unsatisfactory»	2	Partially completed – 69% or less correct answers

**2.3. Sample course work topics**

**Indicator 1 GPC-7.1** - Provision of emergency surgical care at the prehospital stage

**Indicator 2 GPC-7.2** - Acute pancreatitis: conservative therapy

**Indicator 3 GPC-7.3** - Gastrointestinal bleeding as a complication of NSAID use. Physician's actions.

**Indicator 4 GPC-7.4** - Achalasia of the cardia: conservative therapy, indications for surgical intervention

**Indicator 1 PC-2.1** - Clinical variants of acute pancreatitis

**Indicator 2 PC-2.2** - Modern instrumental methods for diagnosing lung and pleural diseases

**Indicator 3 PC-2.3** - Provision of emergency surgical care at the prehospital stage

**Indicator 2 PC-2.4** - Differential diagnosis of acute pancreatitis

**Indicator 5 PC-2.5** - Classification of lung cancer. Clinical features of tumors in different locations

**Indicator 1 PC-3.1** - Chest Trauma: First Aid and Prehospital Physician Tactics

**Indicator 2 PC-3.2** - Postoperative Management in Outpatient Settings.

Evaluation criteria, course work assessment scale

Grade		Description
«excellent»	5	All requirements for writing and presenting the course work have been met: the problem has been identified and its relevance substantiated, various points of view on the issue have been briefly analyzed, the author's position has been logically presented, conclusions have been formulated, the topic has been

Grade		Description
		fully covered, the length has been maintained, the formatting requirements have been met, and additional questions have been answered correctly.
«good»	4	The main requirements for the abstract and its defense have been met, but some shortcomings have been made. Specifically, there are inaccuracies in the presentation of the material; there is a lack of logical consistency in the judgments; the abstract is not within the length of the course work; there are omissions in the formatting; additional questions during the defense were answered incompletely.
«satisfactory»	3	There are significant deviations from the abstracting requirements; in particular: the topic is only partially covered; factual errors have been made in the abstract content or in the answers to additional questions; the presentation lacks the conclusion.
«unsatisfactory»	2	The course work topic has not been fully covered, a significant misunderstanding of the problem has been revealed, or the abstract has not been submitted at all

## 2.4. Scheme for writing academic case history

**Indicator 1 GPC-7.1, Indicator 2 GPC-7.2, Indicator 3 GPC-7.3, Indicator 4 GPC-7.4., Indicator 1 PC-2.1, Indicator 2 PC-2.2, Indicator 1 PC-3.1, Indicator 2 PC-3.2**

The case history must include a cover page and a title page duplicating the cover. Layout guidelines are provided.

Federal State Budgetary Educational Institution of Higher Education  
North-Western State Medical University named after I.I. Mechnikov  
Department of Clinical Surgery  
Head of the Department – Prof. E.E. Topuzov  
Instructor \_\_\_\_\_  
(full name)

Patient \_\_\_\_\_

Full name, age

Diagnosis: \_\_\_\_\_

Explicit major diagnosis, complications, concomitant diseases

Surgery: \_\_\_\_\_

name, date; specify in case of no undergone surgery: none

Instructor:  
Student \_\_\_ group \_\_\_ year  
\_\_\_\_\_ faculty

\_\_\_\_\_  
Full name  
Supervision period: (starting and ending date)

### 1. Patient Identification Section

The patient's surname, given name, patronymic, sex, age, occupation, date and time of admission to the clinic. Informed voluntary consent for medical interventions must be completed. Sample forms are provided below.

### 2. Description of the Patient's Complaints

This section should present the patient's complaints that led to admission to the clinic. Complaints related to the disease for which the patient was hospitalized in the surgical clinic should be distinguished from complaints caused by other conditions.

A. In this section, local and general complaints related to the underlying disease should be identified.

Each complaint should be described in detail and presented in a logical sequence. During the interview, the examiner should actively elicit complaints that are typical for the given disease but were not mentioned by the patient for any reason. Complaints that are possible for this disease but are absent in the patient should also be noted.

If the patient's complaints have changed during the hospital stay (by the beginning of supervision), their dynamics should be reflected in the section "History of the Present Illness", since complaints are described as of the time of examination by the supervising clinician.

B. The patient's complaints characterizing the condition of individual organs and systems should then be assessed.

General condition: weakness, weight loss, fever, edema.

Nervous system: pain of various localizations, tinnitus, dizziness, neurasthenic complaints; vision, hearing, smell, taste.

Cardiovascular system: shortness of breath, palpitations, pain in the left side of the chest.

Respiratory system: shortness of breath, cough, chest pain, characteristics of sputum, hemoptysis.

Digestive system: appetite disturbances, salivation, thirst, dysphagia, belching, heartburn, vomiting and time of its onset, characteristics of vomitus (presence of bile, blood, food consumed the previous day), pain and its characteristics. Complaints of abdominal distension, sensation of heaviness and splashing in the abdomen, intestinal disorders, and defecation disturbances should be described.

Genitourinary system: dysuric symptoms, pain in the lumbar regions, changes in urine characteristics.

### 3. Medical history (anamnesis morbi)

The onset, course, and progression of the disease from the moment of its occurrence to the examination of the patient by the supervising clinician are described. The account of symptoms should be presented in chronological order, with indication of the factors that caused the disease or changes in its course.

Information on previous inpatient, outpatient, and health resort treatment, as well as its duration and effectiveness, should be provided. This section of the case history must be presented with a correct understanding of the mechanisms of disease development, its progression or regression, and assessment of recurrences.

Special attention should be paid to the influence of social, living, occupational, and environmental factors on the onset and course of the disease in the given individual. The patient's own opinion may be reported but should not be regarded as reliable or mandatory.

When describing acute surgical diseases and injuries, the date and time of disease onset or injury occurrence must be indicated, as well as the circumstances of the injury (occupational, domestic, or occurring on the way to or from work).

### 4. Past Medical and Social History (anamnesis vitae).

Brief biographical information

Place of birth and family background; childhood and education; period of puberty; marital status and children, etc.

This section should describe the external environment in which the patient lived prior to the disease and list possible climatic, geographical, and ethnographic conditions, as well as dietary habits.

Family history

Hereditary diseases.

Occupational history

A. Occupational pathway

When assessing this subsection, it is necessary to indicate the age at which the patient began working and to present subsequent stages in chronological order. Total length of employment, primary occupation, and duration of exposure to major occupational hazards should be specified.

B. Characteristics of work involving occupational hazards

This includes a description of:

occupational hazards to which the patient was exposed (vibration, industrial toxins, sudden temperature changes, high humidity, work at heights, radiation, infection, etc.);

performance of hazardous work from which the patient was insufficiently protected;

body position during work;

degree of physical strain in the work process;

nature of vibration (rhythmic, shock-like, concussive), and whether it affected only the upper or lower extremities or the entire body;

meteorological conditions (increased or decreased temperature, fluctuating temperature, drafts, humidity, changes in atmospheric pressure);

exposure to industrial toxins, gases, radiation, and the nature of contact; whether maximum permissible doses, concentrations, or exposure levels were exceeded and by how many times;

duration of the post-exposure period;

work schedule (actual duration of the working day, number of breaks, day or night work);

timeliness of annual leave, its duration, and actual utilization.

Social history

Financial status, nutrition, hygienic conditions.

Epidemiological history

Previous infectious diseases. Special attention should be paid to hepatitis, typhoid fever, and intestinal infections. Injections. Contact with infectious patients. Stay in areas with an unfavorable epidemiological situation during the past year.

Emotional, neurological, and psychological history

Severe emotional stress or traumatic experiences.

Gynecological history (for female patients).

Past medical history, including sexually transmitted diseases.

Harmful habits

Alcohol consumption, smoking, drug use; history of treatment for alcoholism or drug addiction.

Blood transfusion history

Patient's blood group; previous blood transfusions and any complications.

Allergy history

Allergic reactions (rash, angioedema, fever, dyspnea, etc.), including reactions to medications and occupational allergens.

Insurance history

Information on disability status, sick leave, and its duration; causes of disability and disability group.

5. Objective examination of patient's condition (status praesens).

General appearance of the patient.

Assessment of the severity of the condition (satisfactory, moderate, severe; stable, unstable).

Patient position (active, forced, passive).

Body constitution (normal, asthenic, hypersthenic; skeletal deformities). Height. Weight.

Development of subcutaneous fat tissue.

Skin and mucous membranes: color (pallor, cyanosis, pigmentation, hemorrhages), elasticity, moisture, scars, edema.

Musculoskeletal system and joints.

Lymph nodes (size, mobility, tenderness, consistency): submandibular, cervical, supraclavicular and subclavian, axillary, epitrochlear, inguinal.

Thyroid gland: size, consistency, nodules. Ocular signs of thyrotoxicosis (Graefe's sign, Möbius sign, etc.).

Mammary glands (contour symmetry, nipple retraction, consistency, scars, tumors, etc.).

In diseases of the thyroid and mammary glands, these organs should be described in detail in Section 6 (Status localis).

Cardiovascular System

Pulse (rate, rhythm, tension, filling).

Inspection and palpation of the cardiac region: precordial bulging, apical and cardiac impulse.

Borders of relative and absolute cardiac dullness.

Auscultation of the heart and great vessels.

Inspection and palpation of all accessible arteries.

Measurement of arterial blood pressure.

Stange test.

Inspection and palpation of veins. Varicose veins.

Respiratory System

Chest shape, deformities, asymmetry, retraction of specific areas.

Breathing pattern (symmetry, chest movements, lagging of parts, type of breathing, depth, rhythm, rate).

Palpation of ribs, sternum, and intercostal spaces.

Assessment of vocal fremitus.

Comparative and topographic lung percussion.

Auscultation (character of breath sounds, wheezing, crepitation, pleural friction rub).

Bronchophony.

Digestive System

Oral cavity: teeth, gums, tongue (moisture, dryness, coating, teeth imprints), pharynx, tonsils.

Abdomen.

Inspection: visible protrusions of the abdominal wall, their localization and shape (diffuse, distended, retracted), symmetry, scars, skin fistulas and their characteristics.

Participation of the abdominal wall in respiration.

Varicose collateral veins of the abdominal wall.

Visible peristalsis of intestinal loops and stomach.

Superficial palpation, identification of tender areas.

Shchetkin–Blumberg sign.

Oriental percussion: detection of free gas (disappearance of hepatic dullness) and fluid (dullness in dependent areas changing with body position).

Detection of encapsulated fluid (dullness with unchanged borders).

Auscultation: character of peristalsis, correlation between increased peristalsis and pain intensification, vascular murmurs.

Stomach: borders, splash sound, visible peristalsis.

Intestines: palpation along the colon. Splash sound. Tenderness, infiltrates, tumors.

Liver and gallbladder: characteristics of the lower edge of the liver. Borders, size according to Kurlov.

Palpability of the gallbladder. Ortner's sign. Phrenic nerve symptom.

Pancreas: palpability, tenderness.

Spleen: palpability, percussion borders.

Abdominal wall: condition of the linea alba (diastasis of rectus muscles, hernias), umbilicus, external inguinal rings.

Examination for possible hernias (inguinal, femoral, umbilical, postoperative, etc.).

If a hernia is a concomitant condition, describe the size of the hernial orifice and protrusion, cough impulse sign, reducibility.

If a hernia is the primary disease, it should be described in Section 6 (Local status).

Abdominal infiltrates: borders and size, mobility, persistence or disappearance with abdominal wall tension, ballottement.

Rectum

Skin condition, tenderness on digital examination, sphincter tone, tenderness and bulging of rectal walls, hemorrhoidal nodes, tumors.

Prostate gland: shape, size, consistency, tenderness. Seminal vesicles.

Genitourinary System

Inspection of lumbar regions.

Palpation of kidneys, ureters, bladder area.

Findings from examination of male genital organs (scrotum, testes, epididymides).

Gynecological Examination

Tenderness and bulging of vaginal fornices; characteristics of the uterus (size, consistency), adnexa; cervical motion tenderness; vaginal discharge.

Neurological and Mental Status

Level of consciousness, speech.

Sensory function and areas of sensory disturbance.

Motor function: gait, paresis, paralysis of limbs.

Reflexes (pharyngeal, abdominal, tendon–periosteal: elbow, knee, Achilles).

Meningeal signs: neck stiffness, Kernig's sign.

Eyeballs. Pupil condition and pupillary reflexes.

6. Explicit description of the pathological organ or body part (status localis).

This section includes a detailed description of external abdominal hernias, diseases of the mammary glands and thyroid gland, extremities, hemorrhoids, if they constitute the primary disease.

7. Grounds for preliminary diagnosis.

Based on the patient's complaints, medical history, and objective findings, the localization of the pathological process within a specific organ system is consistently substantiated, with justification of the exact organ involved. The course of the process is characterized (acute, chronic, progressive, resolving; stage, extent, complications, etc.).

The mechanisms underlying the occurrence and development of each pathological change must be explained.

All conclusions must be based **only** on the data described earlier in the case history. The diagnosis is formulated only after appropriate justification.

8. Laboratory and special investigation data

This section presents laboratory and instrumental investigation results obtained from the patient's medical records.

9. Differential diagnosis

For each disease included in the differential diagnosis, the following points should be addressed:

A. Description and brief clinical presentation of the disease considered for differential diagnosis.

B. Justification for including this disease in the differential diagnosis. It is necessary to determine what features are common between the disease in the supervised patient and the disease under consideration, based solely on the clinical presentation observed in the supervised patient.

C. Grounds for excluding this disease and identifying differences. Complaints, medical history, and each symptom should be analyzed in detail, and only then laboratory, radiological, endoscopic, ultrasound, and other investigation data.

Differential diagnosis should be performed with all similar diseases (3–4 conditions).

#### 10. Final diagnosis

Primary disease – the disease for which the patient was admitted; in case of death, the disease that caused death.

The genesis of death may involve several diseases, in which case the diagnosis may be combined.

A competing disease is one in which each disease alone could lead to death.

A concurrent disease is one in which neither disease alone would cause death, but together they could.

A background disease is one on the background of which another disease develops.

Complication of the primary disease – a disease that develops as a consequence of the primary disease.

Concomitant disease – a disease that has no common etiology or pathogenesis with the primary disease.

If any symptom or investigation finding does not fit the classical presentation of the disease, an attempt should be made to explain its origin.

#### 11. Description of the disease entity

Anatomy and physiology of the affected organ (supplemented with drawings and diagrams).

Etiology and pathogenesis of the disease, with special emphasis on environmental factors.

Pathological anatomy.

Classification.

Clinical presentation and course of the disease.

Diagnostic methods.

Most common complications and their brief characteristics.

Prevention of the disease and its complications.

#### 12. Treatment methods for the disease

Conservative and surgical treatment, including indications and contraindications.

When describing surgical procedures, schematic drawings should be provided.

Preoperative preparation and postoperative management should be described.

Possible complications (early and late) and their prevention.

Life and work prognosis.

#### 13. Treatment of the supervised patient and its justification

This section should describe the conservative therapy administered to the patient, preoperative preparation, choice of anesthesia, and surgical intervention.

Immediately before surgery, a preoperative epicrisis is written, which must include four sections:

Justified diagnosis;

Indications and contraindications for surgery;

Surgical plan;

Choice of anesthesia.

The description of the surgical intervention should be written in the form of a surgery protocol according to the established scheme.

Surgery protocol:

Date \_\_\_\_\_ Beginning \_\_\_\_\_ ending \_\_\_\_\_ hour.

Surgery \_\_\_\_\_  
name

Surgeon \_\_\_\_\_ full name

Assistants \_\_\_\_\_ full name

Scrub nurse \_\_\_\_\_ full name

Anaesthetist \_\_\_\_\_ full name

Type of anesthesia \_\_\_\_\_

## DESCRIPTION OF THE SURGERY

Preparation of the operative field.

Surgical approach (site of incision, its size and direction, layers of tissues dissected).

Description of pathological changes identified during surgery.

Intraoperative diagnosis.

Name of the operation and a detailed description of the procedure performed.

Indicate how hemostasis was controlled in the cavity and wound; the number of tampons and drains left in the wound or cavity.

Final count of gauze and instruments — result.

Wound management: primary closure, provisional sutures.

Patient's condition during the operation.

Description of the removed gross specimen.

Results of histological and bacteriological examinations.

Postoperative diagnosis.

Signature of the surgeon (supervising clinician).

### 14. Daily notes.

Daily notes are completed on a daily basis. Presentation of examination findings should be organized by organ systems. Particular attention should be paid to the system and organs that are affected or may be affected by the pathological process. All identified pathological signs should be described and compared with previously obtained data.

Daily notes format:

Date    Morning temp.                      Evening temp.    Progress notes    Prescriptions

Complaints: general well-being, physiological functions.

General condition. Pulse, blood pressure, changes in internal organs and in the area of the disease.

Dressing change: condition of the dressing. Nature and amount of wound discharge.

Description of the wound (shape, size, granulation tissue, necrosis). Condition of surrounding tissues (edema, color, etc.). Actions performed during the dressing change (drains removed or inserted).

Signature.

Regimen. Diet.

Investigations on the first day of supervision: blood, urine, and stool tests; stool examination for helminth eggs; Wassermann reaction; chest X-ray examination (fluorography).

Blood group.

Additional investigations required for the patient.

Medication administrations and prescriptions, procedures, preparation for surgery and special investigations.

In postoperative patients, pulse and blood pressure are assessed daily; the heart and lungs are auscultated, with particular attention to the lower lung fields (risk of postoperative pneumonia). Abdominal palpation is performed to monitor for signs of peritonitis. Intestinal function (passage of gas, bowel movements) and urination are monitored and recorded in the daily notes. The condition of the dressing and wound is described, and all actions performed during the dressing change are documented.

### 15. Epicrisis (Discharge Summary)

This section provides a concise summary of the patient's medical history, including the key findings of clinical, laboratory, and instrumental investigations that formed the basis for establishing the diagnosis. The indication for surgical intervention is briefly justified, with specification of the date and nature of the procedure performed. Particular attention is given to the features of the postoperative course, including the timing of drain removal, suture removal, and the character of wound healing.

Recommendations for the patient upon discharge from the hospital are provided, including dietary advice, work and daily activity regimen, health resort treatment, and follow-up with relevant specialists at the place of residence. Measures aimed at preventing disease progression are recommended (e.g., smoking cessation, alcohol restriction, etc.). The prognosis for life and work capacity is indicated, along with employment-related recommendations.

The epicrisis concludes with the complete final diagnosis and the physician's signature.

16. References. This section lists all sources used, with full bibliographic descriptions.

For monographs, the following information should be provided: author's full name, title of the monograph, publisher, place of publication, year of publication, and total number of pages.

#### Evaluation criteria, academic case history assessment scale

Grade		Description
«excellent»	5	Demonstrates a comprehensive understanding of the clinical presentation of the disease in the specific patient, including knowledge of diagnostic features, examination methods, and surgical management strategies for the given patient. Presents the differential diagnosis in a complete and logically structured manner. Correctly outlines a diagnostic and treatment plan. Fully addresses the management of the given nosological entity in the review (theoretical) section of the case history. All requirements for the academic case history are fully met.
«good»	4	Demonstrates a substantial understanding of the clinical presentation of the disease in the specific patient, including knowledge of diagnostic features, examination methods, and surgical management strategies for the given patient. Presents the differential diagnosis in a complete and logically structured manner. Correctly outlines a diagnostic and treatment plan. The review (theoretical) section adequately addresses the management of the given nosological entity. All requirements for the academic case history are met.
«satisfactory»	3	Demonstrates a substantial understanding of the clinical presentation of the disease in the specific patient, including knowledge of diagnostic features, examination methods, and surgical management strategies for the given patient. Presents the differential diagnosis in a complete and logically structured manner. Correctly outlines a diagnostic and treatment plan. The review (theoretical) section adequately addresses the management of the given nosological entity. All requirements for the academic case history are met.
«unsatisfactory»	2	Demonstrates a lack of understanding of the clinical presentation of the disease in the specific patient, as well as insufficient knowledge of diagnostic features, examination methods, and surgical management strategies. Presents the differential diagnosis briefly, including fewer than three conditions. Many requirements for the academic case history are not met. The review (theoretical) section does not address the management of the given nosological entity.

#### 2.5. Scheme for writing «Clinical case presentation»

**Indicator 1 GPC-7.1, Indicator 2 GPC-7.2, Indicator 3 GPC-7.3, Indicator 4 GPC-7.4., Indicator 1 PC-2.1, Indicator 2 PC-2.2, Indicator 1 PC-3.1, Indicator 2 PC-3.2**

**Federal State Budgetary Educational Institution  
of Higher Education  
North-Western State Medical University  
named after I.I. Mechnikov  
of the Ministry of Health of the Russian Federation**

Student's Name \_\_\_\_\_  
number

Group

**CLINICAL CASE PRESENTATION**

Patient's full name \_\_\_\_\_

Ward

Analyze the patient's complaints, history of the present illness and past medical history, results of previously performed investigations, and objective clinical findings, and formulate a preliminary diagnosis according to the accepted scheme.

If you are uncertain about your clinical assessment, indicate as the primary diagnosis the condition you consider most likely, and in the final section list the diseases that cannot be excluded based on the available clinical data.

When preparing the clinical presentation, you should rely on the text of the academic case history completed by you, lecture materials, and recommended additional academic literature. **The official medical record of the patient must not be consulted.**

Preliminary diagnosis

Primary diagnosis:

\_\_\_\_\_

Complications:

\_\_\_\_\_

Comorbidities:

\_\_\_\_\_

The primary disease in this patient should be differentiated from: \_\_\_\_\_

**Justification of the Preliminary Diagnosis**

Explain which clinical findings led you to consider the proposed primary diagnosis and its complications. If you are uncertain about the diagnosis, indicate which clinical symptoms, elements of the medical history, or objective examination findings give rise to doubt and do not allow exclusion of the other conditions you have listed.

Propose a diagnostic workup plan that is necessary and **sufficient to specify the diagnosis**. Clearly and precisely specify the investigations to be performed, the purpose of each investigation, and the expected results.

**DIAGNOSTIC WORKUP PLAN**

<b><i>No</i></b>	<b><i>Name of investigation</i></b>	<b><i>Purpose of investigation</i></b>	<b><i>Expected results</i></b>

References \_\_\_\_\_

\_\_\_\_\_

Date \_\_\_\_\_  
signature \_\_\_\_\_

Student's

Instructor's grade:  
Date \_\_\_\_\_

Instructor's signature:

Evaluation criteria, Clinical case presentation assessment scale

Grade		Description
«excellent»	5	Based on the initial objective clinical examination, demonstrates a complete and thorough collection of the patient's medical history and complaints, a full understanding and appropriate assessment of the clinical features of the disease in this specific patient, and the ability to apply logical clinical reasoning when interpreting examination findings. Accurately and clearly formulates a preliminary diagnosis. Demonstrates knowledge of laboratory and diagnostic methods relevant to the specific patient. Correctly outlines a diagnostic workup plan and provides a comprehensive explanation of the expected results of the proposed investigations. All requirements for preparing the Clinical Presentation of the Patient are fully met.
«good»	4	Based on the initial objective clinical examination, demonstrates a substantial understanding and appropriate assessment of the clinical features of the disease in this specific patient. Correctly interprets examination findings and formulates a preliminary diagnosis. Demonstrates knowledge of diagnostic features and examination methods relevant to the specific patient. Correctly outlines a diagnostic workup and treatment plan. All requirements for preparing the Clinical Presentation of the Patient are met.
«satisfactory»	3	Demonstrates a partial understanding of the clinical features of the disease in this specific patient and limited knowledge of examination methods relevant to the patient. Correctly interprets examination findings and formulates a preliminary diagnosis. Outlines a diagnostic workup and treatment plan correctly, but incompletely or excessively. Most requirements for preparing the Clinical Presentation of the Patient are met.
«unsatisfactory»	2	Demonstrates a lack of understanding of the clinical features of the disease in this specific patient and insufficient knowledge of diagnostic features and examination methods. Is unable to correctly formulate a preliminary diagnosis. Many requirements for preparing the Clinical Presentation of the Patient are not met.

## 2.6 Sample questions for oral interview

Indicator 1 OPC-7.1.

Features of surgical management in strangulated hernia.

Indicator 2 OPC-7.2.

Chronic lung abscess. Causes of progression from acute to chronic abscess. Medical therapy and its outcomes.

Indicator 3 OPC-7.3.

Gastrointestinal bleeding associated with NSAID use: diagnosis, treatment, and prevention.

Indicator 4 OPC-7.4.

Postcholecystectomy syndrome: causes and modern diagnostic methods.

Indicator 1 PC-2.1.

Thyroid cancer: complaints, clinical manifestations, and diagnosis.

Indicator 2 PC-2.2.

Lung cancer: clinical forms; etiology, pathological anatomy, routes of metastasis; diagnosis.

Indicator 3 PC-2.3.

Which specialist consultation is required for a man over 45 years of age with a direct inguinal hernia.

Indicator 4 PC-2.4.

Differential diagnosis of gastrointestinal bleeding.

Indicator 5 PC-2.5.

Classification of rectal fistulas.

Indicator 1 PC-3.1.

Clinical features of acute appendicitis in elderly patients.

Indicator 2 PC-3.2.

Management of stoma patients in outpatient settings; methods of colostomy care.

Evaluation criteria, Control questions grading scale

Grade		Description
«excellent»	5	Demonstrates full knowledge of all course material, with excellent understanding and thorough mastery. Provides correct, well-reasoned, and confident answers to questions within the scope of the syllabus. Uses clear, grammatically correct academic language in oral responses and makes no errors.
«good»	4	Demonstrates complete knowledge of all required course material, with good understanding and solid mastery. Answers questions within the scope of the syllabus without difficulty. Uses appropriate academic language in oral responses and does not make major errors.
«satisfactory»	3	Demonstrates basic knowledge of the core course material. Answers questions within the scope of the syllabus with difficulty. Makes errors in content presentation and oral expression.
«unsatisfactory»	2	Demonstrates insufficient knowledge of most course material. Typically responds only to leading questions from the instructor and does so hesitantly. Makes frequent and serious errors in oral responses.

## 2.7. Sample cases

Indicator 1 OPC-7.1.

A 56-year-old female patient presented with complaints of severe pain in the right abdomen radiating to the right shoulder, scapula, and lumbar region. She had vomited once. She had become ill 10 hours earlier. The pain gradually increased, and her temperature rose to 38°C. Her pulse is 92 beats per minute. She had had a normal stool the day before, and

urination was normal. She had no history of similar pain, and she had no other illnesses. Her tongue was dry and coated with a white coating. No icterus was detected on the skin or sclera. The patient spared the right side of her abdomen when breathing. Palpation revealed tenderness and tension in the right iliac region and right hypochondrium. The gallbladder was not palpable. The Shchetkin-Blumberg sign in the right abdomen and the Rovsing sign were strongly positive. The phrenicus sign and the Ortner sign were negative. Blood test: white blood cells  $12.0 \times 10^9/L$ ; red blood cells  $4.0 \times 10^{12}/L$ ; hemoglobin 130 g/L. Intravenous administration of saline with antispasmodics for 3 hours did not relieve the pain.

Questions:

1. Make a diagnosis.
2. What diseases require differential diagnosis?
3. What additional tests are needed?
4. Justify the surgical approach.
5. List the possible complications.

Indicator 2 OPC-7.2.

A 45-year-old female patient with a long-standing history of varicose veins in her lower extremities developed pain, redness, and induration along the superficial veins in the upper third of her left leg, along with a fever, a week prior to admission to the clinic. Blood tests revealed leukocytes  $11.0 \times 10^9/L$ ; band cells 16%, segmented cells 75%, lymphocytes 4%, monocytes 4%, eosinophils 1%. Hemoglobin 120 g/L, ESR 16 mm/h, and hemoglobin 121 g/L, ESR 15 mm/h. Urinalysis revealed no abnormalities.

Questions:

1. What complication of varicose veins in the lower extremities developed in the patient?
2. Formulate a diagnosis.
3. What additional examinations are needed?
4. Justify the treatment strategy.
5. List the possible complications.

Indicator 3 OPC-7.3.

A 40-year-old patient presented to the emergency room complaining of persistent minor pain in the right iliac region. He had become ill three days prior to admission, when epigastric pain developed. He was taking Mezim. On the second day, the pain shifted to the right iliac region, along with chills and a single episode of vomiting. He had had a bowel movement the day before (the patient had given himself an enema). Today, the abdominal pain has decreased but has not completely resolved. He sought medical attention for the first time. His tongue is moist, and his temperature is  $37.6^\circ C$ . Palpation reveals localized tenderness in the right iliac region, along with tension in the anterior abdominal wall muscles. Voskresensky, Shchetkin-Blumberg, Rovsing, and Sitkovsky symptoms are positive. Blood tests reveal a leukocyte count of  $12.0 \times 10^9/L$ , with other parameters within normal limits. Urinalysis reveals no pathological changes. Abdominal ultrasound reveals a small amount of fluid in the right iliac fossa.

Please comment on the identified symptoms. Treatment options?

Questions:

1. Make a diagnosis.
2. Comment on the identified symptoms.
3. What diseases require differential diagnosis?
4. Justify the surgical approach.
5. List the possible complications.

#### Indicator 4 OPC-7.4.

A 35-year-old female patient complains of redness and thickening of the nipple. On examination, the nipple and part of the areola are covered with moist crusts and small scabs, which, when peeled off, reveal a moist, granular surface. The nipple is thickened and firm to the touch. Blood and urine tests reveal no pathological changes.

Questions:

1. What is the preliminary diagnosis?
2. What conditions should be considered in the differential diagnosis?
3. What additional tests should be performed?
4. Explain the treatment strategy.
5. What is the optimal surgical procedure?

#### Indicator 1 PC-2.1.

A breastfeeding mother has been suffering from mammary inflammation for three weeks. A firm mass measuring 6 x 8 cm is clearly palpated within the affected breast. The overlying skin is bluish-purple. The mass is acutely painful, but there is no softening or fluctuation. The patient's general condition is satisfactory, but her temperature reaches 38°C in the evenings, she occasionally experiences chills, and she feels weak and sweaty. Her condition is not improving despite conservative therapy. Blood tests reveal: leukocytes 17.0 x 10<sup>9</sup>/L; band cells 24%, segmented cells 38%, lymphocytes 28%, monocytes 9%, eosinophils 1%. Hemoglobin is 130 g/L, and ESR is 30 mm/h. Urinalysis reveals no pathological changes.

Questions:

1. Make a diagnosis.
2. What diseases require differential diagnosis?
3. What additional examinations are necessary?
4. Justify the surgical approach.
5. List the possible complications.

#### Indicator 2 PC-2.2.

A 52-year-old patient has been reporting abdominal pain, rumbling, bloating, and constipation alternating with loose stools for three months. A day ago, the abdominal pain became cramping, flatulence ceased, and vomiting with bile and an unpleasant odor recurred. The abdomen is distended, soft, and painful. A tumor-like formation is detected in the left iliac region. Increased intestinal peristalsis and a 'splashing sound' are heard. An abdominal X-ray reveals multiple horizontal fluid levels with gas accumulation above them (Kloiber cups). Blood analysis reveals: hemoglobin 100 g/L, leukocytes 8.0x10<sup>9</sup>/L, band cells - 4%, segmented cells - 56%, lymphocytes -32%, monocytes -7%, eosinophils -1%. ESR - 10 mm/h.

Questions:

1. Provide a preliminary diagnosis.
2. What diseases require differential diagnosis?
3. What additional examinations are necessary?
4. Justify the surgical approach.
5. What is the optimal surgical treatment?

#### Indicator 1 PC-3.1.

A 62-year-old female patient was admitted to the clinic complaining of pronounced yellowing of the skin. The yellowing began a week ago and is increasing, with no previous history of pain. Her stool is acholic, and her urine is dark. Over the past year, she has lost weight and her appetite has worsened. Her condition is moderate. She is malnourished, the abdomen is not distended, and is soft and painless on palpation. A round, painless, tense mass measuring 12 x 8 x 6 cm is present in the right hypochondrium. Blumberg's sign is negative.

Blood tests show leukocytes  $5.0 \times 10^9$  /L, band cells - 4%, segmented cells - 56%, lymphocytes - 32%, monocytes - 7%, eosinophils - 1%. Hemoglobin is 100 g /L, and ESR is 10 mm /h. Questions:

1. What is the round, painless, tense mass in the right hypochondrium?
2. Provide a preliminary diagnosis.
3. What diseases should be differentiated?
4. What additional tests should be performed?
5. Justify the surgical approach.

Indicator 2 PC-3.2.

A 63-year-old patient underwent laparoscopic cholecystectomy two years ago. During this time, she was admitted to the hospital several times due to attacks of pain in the right upper quadrant, accompanied by jaundice of the sclera and skin, dark urine, and hectic fever.

Ultrasound revealed no pathological changes other than a dilation of the common bile duct to 1.5 cm. Blood tests revealed leukocytes of  $10.0 \times 10^9$ /L, band cells of 4%, segmented cells of 56%, lymphocytes of 32%, monocytes of 7%, eosinophils of 1%. Hemoglobin was 120 g/L, and ESR was 10 mm/h.

Questions:

1. What postoperative complications could be associated with the patient's condition?
2. Provide a preliminary diagnosis.
3. What diseases require differential diagnosis?
4. What additional examinations are necessary?
5. Justify the surgical approach.

Evaluation criteria, case grading scale

Grade		Description
«excellent»	5	The explanation of the case-solving process is detailed, well-structured, and accurate; includes appropriate theoretical justification, required schematic drawings and visual demonstrations; demonstrates correct and confident use of terminology. Answers to additional questions are correct and clear.
«good»	4	The explanation of the case-solving process is detailed but not sufficiently logical; contains isolated minor errors in details; shows some difficulty with theoretical justification, schematic drawings, and visual demonstrations. Answers to additional questions are correct but not sufficiently clear.
«satisfactory»	3	The explanation of the case-solving process is insufficiently detailed and inconsistent; contains errors and weak theoretical justification; shows significant difficulties and errors in schematic drawings and visual demonstrations. Answers to additional questions are insufficiently clear and include errors in details.
«unsatisfactory»	2	The explanation of the case-solving process is incomplete and inconsistent; contains major errors; lacks theoretical justification; demonstrates inability to provide schematic drawings and visual demonstrations, or includes numerous errors. Answers to additional questions are incorrect or absent.

### 3. Ongoing assessment

Ongoing assessment includes oral interview, testing, solving cases, writing course work, writing academic case history, preparing clinical case presentation.

#### **4. Examples of assessment methods and evaluation criteria for conducting interim assessment**

##### **4.1. Sample list of control questions:**

###### Indicator 1 GPC-7.1

1. Acute appendicitis: classification, pathogenesis, clinical presentation, differential diagnosis, and treatment tactics.
2. Appendicular infiltrate: clinical presentation, differential diagnosis, outcomes, surgical tactics, and drug treatment.
3. Complications of acute appendicitis. Clinical presentation, differential diagnosis, and surgical tactics.
4. Acute appendicitis in children. Clinical features and surgical tactics.
5. Abdominal hernias. Classification. Clinical presentation, and diagnosis. Sliding hernia, anatomical features. Modern surgical methods for hernia treatment.
6. Hernia complications. Diagnosis. Surgical treatment of complicated abdominal hernias. Surgical tactics.
7. Types of strangulated hernias. Surgical approaches to strangulated hernias, determining the viability of the strangulated organ, and indications for bowel resection.
8. Rare forms of strangulated hernias: clinical features, differential diagnosis, and surgical approaches.

###### Indicator 2 GPC-7.2

1. Anal fissure: clinical features, diagnosis, and treatment.
2. Rectal prolapse: causes, clinical features, diagnosis, differential diagnosis, and treatment.
3. Hemorrhoids: etiology, pathogenesis, clinical features, and treatment.
4. Acute and chronic proctitis. Differential diagnosis and treatment.
5. Anal fistulas. Classification, clinical features, diagnosis, and treatment.
6. Rectal cancer. Clinical features depending on tumor location, diagnosis, and treatment.
7. Colon cancer. Clinical features and treatment depending on tumor location. Types of surgical interventions: palliative and radical surgery.
8. Intestinal obstruction: classification, pathogenesis, clinical features, diagnosis, and treatment.
9. Large bowel obstruction. Classification. Clinical features, diagnosis. Surgical tactics.

###### Indicator 3 GPC-7.3

1. Intussusception. Types of intussusceptions. Causes. Pathogenesis. Clinical presentation, diagnosis, and differential diagnosis. Surgical approach. Indications for disintussusception and intestinal resection.
2. Acute intestinal obstruction. Clinical presentation depending on the level of obstruction. Diagnosis. Surgical approach. Conservative treatment options for adhesive obstruction.
3. The concept of "acute abdomen." Causes, clinical presentation, and diagnosis of acute abdomen diseases. Examination methods for patients with acute abdomen syndrome.

4. Abdominal trauma. Damage to hollow and parenchymal organs. Diagnosis. Basic principles of surgical treatment.
5. Gastric cancer: clinical presentation, diagnosis, metastasis routes, and treatment.
6. Post-resection syndromes in patients who have undergone gastric surgery. Classification, pathogenesis, diagnostics.

#### Indicator 4 GPC-7.4

1. Complications of gastric and duodenal ulcers: clinical presentation and diagnostic methods.
2. Gastric outlet stenosis. Etiology. Classification. Diagnosis and differential diagnosis. Surgical approach.
3. Perforation of gastric and duodenal ulcers. Diagnosis and treatment.
4. Atypical gastric and duodenal ulcer perforations. Clinical features, diagnosis, and surgical approach.
5. Penetrating gastric and duodenal ulcers: clinical presentation, diagnosis, and treatment approach.
6. Acute gastric bleeding: causes, risk factors, clinical presentation, and diagnostic sequence. Indications for emergency surgery.

#### Indicator 1 PC-2.1

1. Differential diagnosis of gastrointestinal bleeding. Diagnostic and surgical tactics depending on the source of bleeding. Methods for stopping bleeding.
2. Portal hypertension. Etiology. Clinical manifestations. Complications. Diagnosis. Treatment principles.
3. Esophageal and cardia varices. Etiology, pathogenesis, diagnosis. Complications. Methods for stopping bleeding.
4. Esophageal diverticula. Classification, clinical presentation, diagnosis, and treatment.
5. Achalasia of the cardia. Clinical presentation, diagnosis, and treatment.
6. Benign tumors of the esophagus. Clinical presentation, diagnosis, and treatment.
7. Cicatricial stenosis of the esophagus. Causes. Clinical presentation, diagnosis, and differential diagnosis. Treatment methods.

#### Indicator 2 PC-2.2

1. Esophageal Injuries, Burns, and Foreign Bodies. Clinical Features, Diagnosis, and Surgical Approaches.
2. Esophageal Cancer. Clinical Features, Diagnosis, and Treatment Principles.
3. Esophageal Cancer. Types of Surgical Interventions and Treatment Approaches Depending on Tumor Location and Disease Stage.
4. Hiatal Hernias. Classification, Clinical Features, and Treatment Principles.
5. Diagnostic Methods in Thoracic Surgery. Clinical, Radiographic, and Instrumental.
6. Acute Lung Abscess and Gangrene. Clinical Features, Diagnosis, Complications, and Treatment Methods.
7. Chronic Lung Abscess. Causes of Acute to Chronic Abscess Transition.
8. Drug and Surgical Treatment. Results of Conservative and Surgical Treatment.

#### Indicator 3 PC-2.3

1. Acute purulent pleurisy. Clinical presentation, diagnosis, conservative and surgical treatment. Indications and methods of pleural drainage.
2. Chronic pleural empyema. Causes, clinical presentation, diagnosis, and treatment.
3. Pyopneumothorax. Causes. Diagnosis. Treatment.

4. Chronic suppurative lung diseases. Classification, clinical manifestations, and treatment principles.
5. Chest injuries. Classification. Clinical manifestations. Examination methods and diagnosis.
6. Pneumothorax. Causes, clinical presentation, diagnosis, and treatment.
7. Hemothorax. Causes, clinical presentation, diagnosis, and treatment.
8. Foreign bodies in the trachea and bronchi. Clinical manifestations, diagnosis, and treatment.
9. Pulmonary hemorrhage. Etiology, pathogenesis, diagnosis, and differential diagnosis. Surgical tactics.
10. Lung cancer. Etiology, pathological anatomy, routes of metastasis. Clinical forms. Diagnostics.

#### Indicator 4 PC-2.4

1. Lung cancer. Diagnosis. Indications for surgical treatment. Types of surgeries.
2. Diseases of the venous lower extremities and their complications (Etiology, pathogenesis, clinical features, diagnosis. Surgical treatment methods).
3. Phlebothrombosis, thrombophlebitis. Etiology, pathogenesis, diagnosis, complications. Differential diagnosis. Treatment.
4. Lymphedema. Etiology, pathogenesis, clinical features. Diagnosis and treatment.
5. Aneurysms of the main arteries. Etiology and pathogenesis. Clinical features, diagnosis, and surgical treatment.
6. Dissecting aortic aneurysm. Etiology, pathogenesis, clinical features. Diagnosis and treatment.
7. Chronic obliterating diseases of the arteries of the lower extremities (obliterating atherosclerosis of the vessels of the lower extremities, disease
8. Differential diagnosis of gastrointestinal bleeding.

#### Indicator 5 PC-2.5

1. Classification of rectal fistulas.
2. Chronic obliterating diseases of the arteries of the lower extremities (obliterating atherosclerosis of the lower extremity vessels, Takayasu's disease, obliterating endarteritis). Differential diagnosis. Treatment.
3. Acute thrombosis of the mesenteric vessels. Clinical presentation, diagnosis, treatment.
4. Acute thrombosis and embolism of the aorta and main arteries. Clinical presentation, diagnosis, and treatment of acute arterial obstruction.
5. Injuries to the main vessels. Classification, diagnosis, and treatment.
6. Classification and clinical presentation of mediastinal tumors and cysts. Superior vena cava syndrome. Indications and surgical methods.
7. Acute pancreatitis. Clinical presentation, diagnosis, differential diagnosis, and treatment.

#### Indicator 1 PC-3.1

1. Clinical features of acute appendicitis in elderly patients, children, and pregnant women
2. Chronic pancreatitis. Clinical features, diagnosis, and treatment principles.
3. Complications of acute pancreatitis: clinical features, diagnosis, and treatment.
4. Complications of gallstone disease. Diagnostic methods and surgical approaches.
5. Dropsy and empyema of the gallbladder. Clinical features, diagnosis, and treatment.
6. Gallstone disease: clinical features, diagnosis, and differential diagnosis; indications for surgery. Modern surgical treatment methods.

7. Acute cholecystitis. Clinical features, diagnosis, complications, and differential diagnosis. Indications for surgery. Treatment.

8. Postcholecystectomy syndrome. Etiology, modern diagnostic methods, and surgical approaches.

9. Obstructive jaundice. Causes and clinical manifestations. Diagnosis and treatment principles.

#### Indicator 2 PC-3.2

1. Obstructive jaundice. Causes, clinical manifestations. Diagnosis. Treatment principles.

2. Thyroid cancer. Clinical presentation, diagnosis. Treatment.

3. Nodular goiter. Clinical presentation, differential diagnosis. Indications for surgical treatment. Complications during and after surgery.

4. Toxic goiter. Indications for surgical treatment. Complications during and after surgery.

5. Thyroiditis. Clinical presentation, diagnosis, differential diagnosis, indications for surgical treatment.

6. Breast cancer: clinical forms, stages of the disease, diagnosis, differential diagnosis, treatment.

7. Benign breast tumors (fibroadenomas, lipomas). Clinical presentation, diagnosis, differential diagnosis. Treatment.

8. Peritonitis. Etiology and pathogenesis. Classification. Clinical manifestations at different stages of peritonitis. Diagnostic methods, surgical tactics.

9. Limited peritonitis: types, causes, clinical features, diagnosis, treatment.

Evaluation criteria, control question assessment scale

Grade		Description
«excellent»	5	Knows all the course material, understands it well, and has firmly mastered it. Provides correct, informed, and confident answers to questions (within the syllabus). Uses correct language in oral responses and makes no mistakes.
«good»	4	Knows all required course material, understands it well, and has firmly mastered it. Answers questions (within the syllabus) without difficulty. Uses literary language in oral responses and does not make serious errors.
«satisfactory»	3	Knows the basic curriculum material. Difficulty answering questions (within the curriculum). In oral responses, makes errors in presenting the material and in structuring the speech.
«unsatisfactory»	2	Unversed in most of the course material, typically only responds to the teacher's leading questions with uncertainty. Frequent errors in oral responses.

#### 4.2. Sample list of cases:

##### Indicator 1 GPC-7.1

A 40-year-old man was admitted to the emergency room of the hospital complaining of abdominal pain and weakness. An hour ago, he suddenly felt severe pain in the epigastric region; any movement intensifies the pain. He has a history of peptic ulcer. Physical examination: the abdomen is not involved in breathing, the relief of the muscles of the anterior abdominal wall is clearly visible. Palpation reveals a board-like tension of the anterior abdominal wall, sharp pain on percussion and palpation. Symptoms of peritoneal irritation are sharply positive. Percussion reveals tympanitis in the right hypochondrium,

shortening of the percussion sound in the right lateral canal and the right iliac region. On a plain radiograph, a crescent-shaped enlightenment is present under the dome of the diaphragm - free gas. Blood analysis: leukocytes  $17.0 \times 10^9/l$ ; Band cells – 24%, segmented cells – 38%, lymphocytes – 28%, monocytes – 9%, eosinophils – 1%. Hemoglobin – 130 g/L, ESR – 30 mm/h. Urinalysis reveals no abnormalities.

Questions:

1. Formulate a preliminary diagnosis.
2. Conduct a differential diagnosis.
3. Develop an examination plan.
4. Justify the surgical approach.
5. List possible postoperative complications.

### **Indicator 2 GPC-7.2**

A 56-year-old female patient complained of severe pain in the right abdomen radiating to the right shoulder, scapula, and lumbar region. She had vomited once. She became ill 10 hours earlier. The pain gradually increased, and her temperature rose to  $38^{\circ}\text{C}$ . Pulse rate is 92 beats per minute. Stool was normal the day before, and urination is not affected. There was no history of similar pain, and she had no illnesses. The tongue is dry, coated with a white coating. There is no icterus of the skin or sclera. The patient spares the right side of her abdomen when breathing. Palpation reveals tenderness and tension in the right iliac region and right hypochondrium. The gallbladder is not palpable. The Shchetkin-Blumberg sign in the right abdomen and the Rovsing sign are sharply positive. The phrenicus sign and the Ortner sign are negative. Blood test: white blood cells  $12.0 \times 10^9/L$ ; red blood cells  $4.0 \times 10^{12}/L$ ; hemoglobin 130 g/L. Intravenous administration of saline with antispasmodics for 3 hours did not relieve the pain.

Questions:

1. Make a diagnosis.
2. What diseases require differential diagnosis?
3. What additional tests are needed?
4. Justify the surgical approach.
5. List the possible complications.

### **Indicator 3 GPC-7.3**

Patient V., 30, was admitted to the advanced medical care facility two hours after a shrapnel wound to the right side of the chest. His condition is serious and his consciousness is confused. Heart rate is 130 beats per minute, blood pressure is 80/60 mmHg. The skin and visible mucous membranes are pale. A wound up to 7 mm in diameter, moderately bleeding, is located 2 cm below the nipple. There is no second wound opening. Auscultation reveals significantly weakened breath sounds over the entire right side of the chest, and percussion reveals dullness to percussion, even in the supine position. Blood obtained during pleural puncture quickly clotted in the test tube.

Questions:

1. Make a diagnosis.
2. What treatment measures should be performed at the advanced medical care facility?
3. What additional examinations should be performed?
4. Justify the surgical approach.
5. What is special about the shock that occurs with a chest wound?

### **Indicator 4 GPC-7.4.**

A 55-year-old man is admitted to the hospital with complaints of vomiting food for a week. He previously complained of rotten belching and pain, which has recently been followed by a feeling of heaviness in the epigastric region. He has not been examined but has a history of

peptic ulcer disease. The skin and mucous membranes are dry. Hemodynamics is stable. The abdomen is soft, with mild tenderness in the epigastrium, and a splashing sound is also heard there. The Shchetkin-Blumberg sign is negative. Blood tests show leukocytes  $8.0 \times 10^9/L$ , band cells 4%, segmented cells 56%, lymphocytes 32%, monocytes 7%, eosinophils 1%. Hemoglobin is 100 g/L, and ESR is 10 mm/h.

Questions:

1. Formulate a preliminary diagnosis.
2. What diseases require differential diagnosis?
3. What additional examinations are necessary?
4. Justify the surgical approach.
5. What are the possible surgical intervention options?

#### **Indicator 1 PC-2.1.**

A 58-year-old female patient developed dysphagia ten months ago, which gradually worsened. Currently, she has difficulty swallowing a sip of water. The patient is severely emaciated. A cluster of dense lymph nodes is palpated above the left clavicle. Blood tests reveal: leukocytes  $6.0 \times 10^9/L$ , band cells 5%, segmented cells 57%, lymphocytes 32%, monocytes 7%, eosinophils 1%. Hemoglobin 100 g/L, ESR 10 mm/h.

Questions:

1. Provide a preliminary diagnosis.
2. What diseases should be differentiated?
3. What additional tests should be performed?
4. What does a cluster of dense lymph nodes above the left clavicle indicate?
5. Justify the surgical approach.

#### **Indicator 2 PC-2.2.**

A 52-year-old patient has been reporting abdominal pain, rumbling, bloating, and constipation alternating with loose stools for three months. A day ago, the abdominal pain became cramping, flatulence ceased, and vomiting with bile and an unpleasant odor recurred. The abdomen is distended, soft, and painful. A tumor-like formation is detected in the left iliac region. Increased intestinal peristalsis and a "splashing sound" are heard. An abdominal X-ray reveals multiple horizontal fluid levels with gas accumulation above them (Kloiber cups). Blood analysis reveals: hemoglobin 100 g/L, leukocytes  $8.0 \times 10^9/L$ , band cells - 4%, segmented cells - 56%, lymphocytes -32%, monocytes -7%, eosinophils -1%. ESR - 10 mm/h.

Questions:

1. Provide a preliminary diagnosis.
2. What diseases require differential diagnosis?
3. What additional examinations are necessary?
4. Justify the surgical approach.
5. What is the optimal surgical treatment?

#### **Indicator 1 PC-3.1**

A 45-year-old patient has been experiencing intermittent rectal bleeding for a long time. Bleeding occurs after defecation (small amounts of scarlet blood, ranging from traces on paper to a few drops). Over the past two months, the bleeding has intensified, occurring after almost every stool in a small stream of scarlet blood. Blood test results: hemoglobin 100 g/L, leukocytes  $8.0 \times 10^9/L$ , band cells 4%, segmented cells 56%, lymphocytes 32%, monocytes 7%, eosinophils 1%. ESR 10 mm/h.

Questions:

1. Provide a preliminary diagnosis.
2. What diseases should be differentiated?

3. What additional tests should be performed?
4. Justify the treatment plan.
5. What surgical intervention would be optimal?

**Indicator 2 PC-3.2**

A 38-year-old patient complains of cramping abdominal pain, nausea, vomiting, flatulence, and no bowel movements for 3 days. A year ago, he underwent surgery for gangrenous appendicitis and generalized peritonitis. On examination, the abdomen is distended, tender to palpation, and asymmetrical. Peristalsis is sluggish, with a splashing sound. The Shchetkin-Blumberg sign is negative. Blood tests show hemoglobin 120 g/L, leukocytes  $8.0 \times 10^9/L$ , band cells 4%, segmented cells 56%, lymphocytes 32%, monocytes 7%, eosinophils 1%, ESR 10 mm/h.

Questions:

1. Make a preliminary diagnosis.
2. What is the cause of the patient's condition?
3. What diseases require differential diagnosis?
4. What additional examinations are necessary?
5. Justify the surgical approach.

Evaluation criteria, case assessment scale

Grade		Description
«excellent»	5	The explanation of the case solution is detailed, consistent, and accurate; includes theoretical justification; includes the required schematic diagrams and visual demonstrations; terminology is used correctly and fluently. Answers to additional questions are correct and clear.
«good»	4	The explanation of the case solution is detailed, but not sufficiently logical; contains isolated minor errors in details; includes some difficulties in theoretical justification, schematic diagrams, and visual demonstrations. Answers to additional questions are correct, but not sufficiently clear.
«satisfactory»	3	The explanation of the case solution is insufficiently complete and inconsistent; contains errors and weak theoretical justification; shows significant difficulties and errors in schematic diagrams and visual demonstrations. Answers to additional questions are insufficiently clear and include errors in details.
«unsatisfactory»	2	The explanation of the case solution is incomplete and inconsistent; contains major errors; lacks theoretical justification; does not demonstrate the ability to provide schematic diagrams and visual demonstrations, or includes numerous errors. Answers to additional questions are incorrect or absent.

Evaluation criteria, final assessment scale

Grade		Description
«excellent»	5	The student correctly answered the theoretical question(s) and demonstrated excellent knowledge within the scope of the course material. The practical task(s) were completed correctly. The student demonstrated excellent skills and proficiency in applying acquired knowledge and skills to problem solving within the course material.

Grade		Description
		All additional questions were answered.
«good»	4	The student answered the theoretical question(s) with minor inaccuracies and demonstrated good knowledge within the scope of the course material. The practical task(s) were completed with minor inaccuracies. The student demonstrated good skills and proficiency in applying acquired knowledge and skills to problem solving within the course material. Most additional questions were answered.
«satisfactory»	3	The student answered the theoretical question(s) with significant inaccuracies and demonstrated satisfactory knowledge within the scope of the course material. The practical task(s) were completed with significant inaccuracies. The student demonstrated satisfactory skills and proficiency in applying acquired knowledge and skills to problem solving within the course material. Numerous inaccuracies were made when answering additional questions.
«unsatisfactory»	2	The student demonstrated an insufficient level of knowledge and skills when answering the theoretical question(s) and completing the practical task(s) within the scope of the course material. A large number of incorrect answers were given to additional questions.

## 5. Procedure for conducting interim assessment

Interim assessment for the course is conducted in the form of an examination. The examination includes: oral interview (control questions) and solving cases.