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

«General 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 **General 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.'

Authors of the Course Syllabus
Glushkov N.I., Head of the Department of General Surgery, Professor, Doctor of Medical Sciences
Melnikov M.V., Professor, Department of General Surgery, Doctor of Medical Sciences
Ivanov M.A., Professor, Department of General Surgery, Doctor of Medical Sciences

***Reviewer*:**
Bubnova N.A., Professor, Department of General Surgery, Federal State Budgetary Educational Institution of Higher Education I.P. Pavlov First Saint Petersburg State Medical University of the Ministry of Health of the Russian Federation, Doctor of Medical Sciences, Professor.

Approval:
The Course Syllabus was discussed at a meeting of the Department of General Surgery on May 11 2021, Minutes №

Head of the Department _____ / Glushkov N.I./
(signature)

Approved by the Methodological Committee for the specialty 31.05.01 General Medicine
May 11, 2021

Chairperson _____ / I.G. Bakulin /

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

May 20, 2021
Chairperson _____ / S.A. Artyushkin /

Date of revision: ___

CONTENTS

1. Aim of the course

The aim of the discipline **General Surgery** is to form the core competencies necessary for further education and professional practice of a general physician, including activities related to healthcare organization.

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

The course «General 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
General Professional Competencies GPC-4. Able to use medical devices provided for by the established standards of medical care and to perform patient examinations for the purpose of establishing a diagnosis.	**Indicator 1 GPC-4.1** Applies medical devices during diagnostic procedures provided for by the established standards of medical care.
	Indicator 2 GPC-4.2 Applies diagnostic methods, including instrumental methods, when examining a patient for the purpose of establishing a diagnosis.
	Indicator 3 GPC-4.3 Verifies the diagnosis using laboratory, instrumental, and specialized examination methods, as well as consultative opinions of relevant medical specialists.
	Indicator 4 GPC-4.4 Justifiably applies medical devices in solving diagnostic tasks.
Professional Competencies PC-2 Able to conduct patient examinations to identify major pathological conditions, symptoms, disease syndromes, and nosological forms.	**Indicator 1 PC-2.1** Conducts patient interviewing and examination (collection of complaints, medical and life history, physical examination, palpation, percussion, and auscultation).
	Indicator 2 PC-2.2 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, clinical guidelines, and medical care standards.
	Indicator 3 PC-2.3 Refers the patient for consultation with medical specialists and/or for the provision of specialized medical care in inpatient or day-care (day hospital) settings when medically indicated, in accordance with current regulations for the provision of medical care,

	clinical guidelines, and medical care standards.
	Indicator 4 PC-2.4 Performs differential diagnosis with other diseases and/or conditions.
	Indicator 5 PC-2.5 Establishes a diagnosis in accordance with clinical classifications and the current International Statistical Classification of Diseases and Related Health Problems (ICD).

Code of the competence achievement indicator	Learning outcomes (Assessment criteria)	Assessment methods
Indicator 1 GPC-4.1	Knows: the established standards of medical care delivery, the main diagnostic procedures, and medical devices used in clinical practice.	Cases, tests, control questions, academic case history
	Is able to: apply medical devices to accomplish diagnostic tasks.	
	Has the skill of: effectively applying medical devices in various clinical conditions and during diagnostic procedures.	
Indicator 2 GPC-4.2	Knows: the main diagnostic methods, including instrumental techniques, used in the examination of a patient to establish a diagnosis.	Cases, tests, control questions, practical skills, academic case history
	Is able to: apply various diagnostic methods, including instrumental techniques, based on the presumed diagnosis and substantiate their necessity in a specific clinical case.	
	Has the skill of: using various diagnostic methods, including instrumental techniques, to verify the diagnosis.	
Indicator 3 GPC-4.3	Knows the main clinical manifestations and symptom complexes of pathological conditions in surgery, as well as the appropriate diagnostic methods applicable to them.	Cases, tests, control questions, practical skills, academic case history
	Is able to: apply laboratory, instrumental, and specialized diagnostic methods, as well as use consultation reports from relevant medical specialists, to verify the diagnosis.	
	Has the skill of: interpreting the results of laboratory, instrumental, and specialized diagnostic methods, as well as specialist consultations, in clinical practice.	
Indicator 4 GPC-4.4	Knows: the list of essential medical devices and the indications for their use.	Cases, tests, control questions, academic case history
	Is able to: use medical devices in clinical practice.	
	Has the skill of: applying various medical devices in the management of different pathological conditions in surgery.	
Indicator 1	Knows: the fundamental principles of history taking	Cases, tests, control

PC-2.1	and methods of objective patient examination, as well as the rules, sequence, and technique of general physical examination (inspection, palpation, percussion, auscultation).	questions, practical skills, academic case history
	Is able to: conduct a structured review of systems and perform an objective physical examination of patients.	
	Has the skill of: active history taking and performing a comprehensive physical examination using palpation, percussion, and auscultation techniques.	
Indicator 2 PC-2.2	Knows: the symptom complexes of major surgical conditions, the methods of their diagnosis, and the current regulations governing the provision of medical care for these conditions.	Cases, tests, control questions, academic case history
	Is able to: search for relevant information in current clinical guidelines and apply this information to the diagnosis and treatment of diseases.	
	Has skills in: developing diagnostic and treatment plans for patients with surgical pathology.	
Indicator 3 PC-2.3	Knows: the procedures and indications for referral of a patient to related specialists.	Cases, tests, control questions, academic case history
	Is able to: substantiate the diagnostic and treatment strategy for patients with surgical pathology in accordance with current clinical guidelines.	
	Has skills in: establishing a clinical diagnosis and applying various additional diagnostic methods.	
Indicator 4 PC-2.4	Knows: the concept of differential diagnosis, as well as the main surgical nosologies with similar clinical presentations and their distinguishing features.	Cases, tests, control questions, academic case history
	Is able to: analyze examination data for the purpose of performing a differential diagnosis.	
	Has skills in: applying diagnostic techniques to identify major surgical diseases and conditions.	
Indicator 5 PC-2.5	Knows: the characteristic clinical manifestations of major surgical diseases and conditions.	Cases, tests, control questions, academic case history
	Is able to: use information from clinical guidelines and the current International Statistical Classification of Diseases and Related Health Problems (ICD).	
	Has skills in: examining patients with surgical pathology.	

4. Scope of the course and types of learning activities

Type of learning activity	Workload	Semesters	
		5	6
Contact hours (student–instructor interaction)	**102**	**50**	**52**
Lectures (Lec)	30	14	16
Practical classes (PC)	68	36	32

Interim assessment: examination, including the examination session and group consultations.	4		4
Self-study:	**78**	**26**	**52**
During the period of theoretical instruction	46	26	20
Preparation for the examination	32		32
Total workload: academic hours	180		
Credit units	5		

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.	General Surgery Issues	Introduction. History of Surgery. Surgical Operation. Prevention of Infection in Surgery. Asepsis. Antisepsis.	PC-2
2.	Fundamentals of Traumatology and Injury Surgery	Bleeding: types, diagnosis, and methods of hemostasis. Thermal injuries (burns, frostbite). General issues in traumatology (first aid, stabilization, diagnostic principles). Closed injuries (diagnosis, management). Fractures and dislocations (definition, diagnosis, transport and therapeutic immobilization). Open injuries (wounds): wound management and treatment.	GPC-4, PC -2
3.	Selected Fields of Surgery	Fundamentals of transfusiology. Disorders of circulation. Fundamentals of oncology.	GPC-4, PC -2
4.	Surgical Infection	Surgical infections of the skin, subcutaneous tissue, and glandular organs. Surgical infections of the fingers and hand. Surgical infections of bones and joints. Anaerobic and acute specific infections. Inflammation of serous cavities. Sepsis.	GPC-4, PC -2

5.2.Lecture plan

№	Title of the course section	Lecture topics	Active learning methods	Workload (academic hours)

1.	General Surgery Issues	Lec 1 Introduction. History of Surgery (Russian and international surgery). Surgical operation (indications, preoperative preparation, operative stage, postoperative period).	-	2
		Lec 2 Prevention of infection in surgery. Asepsis (contact, airborne-droplet, and implantation routes of transmission).	-	2
		Lec 3 Antisepsis (concept; mechanical, physical, chemical, and biological antisepsis).	-	2
2.	Fundamentals of Traumatology and Injury Surgery	Lec 4 Hemorrhage (diagnosis, methods of hemostasis, management of consequences of blood loss). Control of bleeding.	-	2
		Lec 5 General principles of traumatology (first aid, stabilization of the patient's condition, diagnostic considerations). Closed injuries (diagnosis, management).	-	2
		Lec 6 Fractures and dislocations (definition, diagnosis, transport and therapeutic immobilization).	-	2
		Lec 7 Thermal injuries (diagnosis, burn disease, local treatment of burns).	-	2
		Lec 8 Wounds (classification, wound healing process).	-	2
		Lec 9 Principles of wound management (treatment of various types of wounds according to the stages of the wound healing process).	-	2
3.	Selected Fields of Surgery	Lec 10 Fundamentals of transfusiology I (indications for blood transfusion, blood products, blood group determination). Fundamentals of transfusiology II (autologous blood transfusion, transfusion reactions and complications, blood substitutes).	-	2
		Lec 11 Disorders of circulation (acute and chronic circulatory disorders: diagnosis and treatment). Disorders of circulation (venous outflow impairment).	-	2
		Lec 12 Fundamentals of oncology (concept of tumor; etiology, pathogenesis, diagnosis, treatment, prevention).	-	2
4.	Surgical Infection	Lec 13 Surgical infection – I (infections of the skin and subcutaneous tissue; felon; mastitis; paraproctitis; mediastinitis; phlegmon).	-	2
		Lec 14 Chronic specific infections (tuberculosis, actinomycosis). Anaerobic and acute specific infections (anaerobic variants of fasciitis, myositis and myonecrosis, cellulitis; tetanus).	-	2
		Lec 15 Inflammation of serous cavities (peritonitis, pleuritis, pericarditis). Sepsis (concept, classification, diagnosis, treatment).	-	2
			Total	30

5.3. Practical classes plan

№	Title of the course section	Practical class topic	Active learning methods	Assessment	Workload (academic hours)
1.	General Surgery Issues	PC 1 Desmurgy. Soft dressings (immobilizing, therapeutic, and hemostatic dressings). Surgical examination: general inspection. Structure of the medical history (complaints, history of present illness, past medical history, subjective status)	Group discussion	Control questions, case interview, tests, practical skill demonstration	4
2.	General Surgery Issues	PC 2 Antisepsis (concept, mechanical, physical, chemical, and biological antisepsis)	Group discussion	Control questions, case interview, tests, practical skill demonstration	4
3.	General Surgery Issues	PC 3 Asepsis. Prevention of airborne infection: organization of the surgical department, operating suite, and dressing room. Prevention of contact infection: sterilization of linen, suture materials, and instruments; modern requirements for dressing and suture materials; surgical hand preparation and preparation of the operative field; epidemiological surveillance. Prevention of endogenous infection.	Group discussion	Control questions, case interview, tests, practical skill demonstration	4
4.	Fundamentals of Traumatology and Injury Surgery	PC 4 Hemorrhage: Types; diagnostic algorithms. Methods of hemostasis. Blood loss: pathogenesis, compensatory-adaptive mechanisms. Management of blood loss.	Group discussion	Control questions, case interview, tests, practical skill demonstration	4
5.	Fundamentals of Traumatology and Injury Surgery	ПРС 5 Fundamentals of traumatology. Classification of injuries. Fractures and dislocations: clinical presentation, diagnosis, treatment. First aid (pre-medical and medical), transport and therapeutic immobilization. Examination of the musculoskeletal system. Injury prevention; specific features of trauma in elderly and senile	Group discussion	Control questions, case interview, tests, practical skill demonstration	4

		patients.			
6.	Fundamentals of Traumatology and Injury Surgery	PC 6 Thermal injuries: Burns, frostbite, electrical injuries. Clinical presentation, diagnosis, treatment, and prevention. Rehabilitation of patients with thermal trauma. Open injuries. Wounds. Wound healing process. Principles of wound management (treatment of different types of wounds according to the stages of the wound healing process). Prevention of complications. Rehabilitation algorithm.	Group discussion	Control questions, case interview, tests, practical skill demonstration	4
7.	General Surgery Issues	PC 7 Surgical operation. Preoperative preparation of patients. Surgical procedure. Intensive care in surgical patients. Prevention of complications. Postoperative rehabilitation.	Group discussion	Control questions, case interview, tests, practical skill demonstration	4
8.	Selected Fields of Surgery	PC 7 Surgical operation. Preoperative preparation of patients. Surgical procedure. Intensive care in surgical patients. Prevention of complications. Postoperative rehabilitation.	Group discussion	Control questions, case interview, tests, practical skill demonstration	4
9.	Selected Fields of Surgery	PC 9 Complications associated with blood transfusion. Blood and blood products. Hemocorrective agents.	Group discussion	Control questions, case interview, tests, practical skill demonstration	4
10.	Selected Fields of Surgery	PC 10 Disorders of circulation. Examination of the cardiovascular system. Main types of circulatory disorders. Diagnosis. Surgical management. Specific aspects of managing patients with vascular diseases in outpatient (polyclinic) settings. Rehabilitation after vascular surgery.	Group discussion	Control questions, case interview, tests, practical skill demonstration	4
11.	Selected Fields of Surgery	PC 11 Fundamentals of oncology. (concept of oncological diseases; etiology, pathogenesis, diagnosis, treatment, prevention of tumors) Rehabilitation after comprehensive treatment.	Group discussion	Control questions, case interview, tests, practical skill demonstration	4
12.	Surgical Infection	PC 12 Surgical infection. Organization of surgical care in outpatient settings. Purulent infections of the skin and subcutaneous tissue.	Group discussion	Control questions, case interview, tests, practical skill demonstration	4

		Purulent infections of glandular organs. Prevention of infection.			
13.	Surgical Infection	PC 13 Purulent diseases of bones, joints, fingers, and hand (osteomyelitis, superficial and deep forms of felon, phlegmon). Prevention of complications.	Group dis-cussion	Control questions, case interview, tests, practical skill demonstration	4
14.	Surgical Infection	PC 14 Inflammation of serous cavities. Surgical examination of patients with diseases of the chest and abdominal organs. Peritonitis, pleuritis, pericarditis (etiology, pathogenesis, clinical presentation, diagnosis, treatment). Prevention of sepsis.	Group dis-cussion	Control questions, case interview, tests, practical skill demonstration	4
15.	Surgical Infection	PC 15 Anaerobic infections (anaerobic variants of fasciitis, myositis and myonecrosis, cellulitis; tetanus)	Group dis-cussion	Control questions, case interview, tests, practical skill demonstration	4
16.	General Surgery Issues	PC 16 Medical history.	Group dis-cussion	Control questions, case interview, tests, practical skill demonstration	4
17.	General Surgery Issues	PC 17 Critical conditions in surgery.	Group dis-cussion	Control questions, case interview, tests, practical skill demonstration	4
				Total:	68

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)
1.	General surgery issues	Working with lecture materials, working with academic literature	Tests, oral interview, academic case history	10
2.	Fundamentals of Traumatology and Injury Surgery	Working with lecture materials, working with academic literature	Tests, oral interview, academic case history	12
3.	Selected fields of surgery	Working with lecture materials,	Tests, oral interview, academic case	12

		working with academic literature	history	
4.	Surgical infection	Working with lecture materials, working with academic literature	Tests, oral interview, academic case history	12
5.	Preparation for interim assessment activiti			32
			Total:	78

6. Methodological guidelines for students on mastering the course

Mastering the course requires the use of appropriate methodological guidelines and step-by-step study of each topic by the student:

1) attending and assimilating lecture material;
2) independent preparation for practical classes using lecture notes and relevant academic literature;
3) discussion with the instructor during practical classes at the department;
4) ongoing assessment of completed topics during practical sessions.

Attending and assimilating lecture material involves independently preparing lecture notes as an introduction to the topic.

When preparing for practical classes, students should review the lecture material and familiarize themselves with the relevant textbook content. If necessary, they should consult not only the main textbook but also additional literature recommended by the lecturer. Preparation for each practical class begins with reviewing the class plan, which outlines the content of the topic. Careful consideration and study of the questions in the plan should be based first on the lecture material and then on required and supplementary literature recommended for the topic.

All new concepts related to the topic must be memorized and added to a glossary, which is advisable to maintain from the beginning of the course. The outcome of this work should be demonstrated in the student's ability to confidently answer theoretical questions during practical classes, actively participate in discussions, correctly complete practical assignments and контрольные работы (written assessments).

During preparation for practical classes, particular attention should be paid to independent study of the recommended literature.

Recommendations for Working with Literature

When working with literature, it is important to be able to:

compare, classify, group, and systematize information according to a specific learning task;

summarize information and evaluate what has been read or heard;

identify and record the key content of texts; formulate the main idea orally and in writing; prepare outlines and theses;

prepare and deliver extended presentations or reports;

work in different formats (individually, in pairs, in groups), interacting effectively with others;

use reference and supporting materials;

monitor and objectively assess one's own work and that of peers;

seek clarification or assistance from instructors and fellow students;

use contextual clues, dictionaries, and textual supports (keywords, structure, introductory information);

use paraphrasing, synonyms, descriptive explanations, examples, and clarifications in speaking and writing;

repeat or paraphrase a partner's statement to confirm understanding;

request clarification or repetition when necessary;

use non-verbal communication (facial expressions, gestures), especially when language resources are insufficient.

Preparation for Ongoing Assessment

When preparing for ongoing assessment, it is advisable to:

carefully review the list of questions and identify the sources containing the required information;

thoroughly read the recommended literature;

prepare concise outlines or structured plans of answers.

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. Gostishchev VK. General Surgery. Moscow: GEOTAR-Media; 2012. 608 p.
2. Kuzin MI, editor. Surgical Diseases: Textbook for Medical Students. Moscow: Meditsina; 2005.

Electronic versions available in the MOODLE distance learning system

1. Melnikov MV. Chronic Diseases of the Aorta and Arteries [Electronic resource] Saint Petersburg: Publishing Office of North-Western State Medical University named after I.I. Mechnikov; 2013. Available at: https://moodle.szgmu.ru/pluginfile.php/176192/mod_resource/content/1/%D0%A5%D1%80%D0%BE%D0%BD%D0%B8%D1%87%D0%B5%D1%81%D0%BA%D0%B8%D0%B5%20%D0%B7%D0%B0%D0%B1%D0%BE%D0%BB%D0%B5%D0%B2%D0%B0%D0%BD%D0%B8%D0%B5%20%D0%B0%D0%BE%D1%80%D1%82%D1%8B%20%D0%B8%20%D0%B0%D1%80%D1%82%D0%B5%D1%80%D0%B8%D0%B9.pdf
2. Kokorin KV. Purulent-Inflammatory Diseases of the Fingers [Electronic resource]. Saint Petersburg: Publishing Office of North-Western State Medical University named after I.I. Mechnikov; 2015. Available at: https://moodle.szgmu.ru/pluginfile.php/82220/mod_resource/content/1/%D0%9A%D0%BE%D0%BA%D0%BE%D1%80%D0%B8%D0%BD%20%D0%BF%D0%B0%D0%BD%D0%B0%D1%80%D0%B8%D1%86%D0%B8%D0%B9.pdf
3. Susla PA, Melnikov MV. Purulent Diseases of Glandular Organs [Electronic resource]. Saint Petersburg: Publishing Office of North-Western State Medical University named after I.I. Mechnikov; 2017. Available at: https://moodle.szgmu.ru/pluginfile.php/176280/mod_resource/content/1/%D0%9E%D1%81%D1%82%D1%80%D1%8B%D0%B5%20%D0%B7%D0%B0%D0%B1%D0%BE%D0%BB%D0%B5%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F%20%D0%B6%D0%B5%D0%BB%D0%B5%D0%B7%D0%B8%D1%81%D1%82%D1%8B%D1%85%20%D0%BE%D1%80%D0%B3%D0%B0%D0%BD%D0%BE%D0%B2.pdf
4. Susla PA, Melnikov MV. Purulent Diseases of Glandular Organs [Electronic resource]. Saint Petersburg: Publishing Office of North-Western State Medical University named after I.I.

Mechnikov; 2017. Available at: https://moodle.szgmu.ru/pluginfile.php/25206/mod_resource/content/1/%D0%9C.%D0%92.%20%D0%9C%D0%B5%D0%BB%D1%8C%D0%BD%D0%B8%D0%BA%D0%BE%D0%B2_%D0%9D%D0%B0%D1%80%D1%83%D1%88%D0%B5%D0%BD%D0%B8%D1%8F%20%D0%BA%D1%80%D0%BE%D0%B2%D0%BE%D0%BE%D0%B1%D1%80%D0%B0%D1%89%D0%B5%D0%BD%D0%B8%D1%8F.pdf
5. Gostishchev, V. K. General surgery. The manual : tutorial / V. K. Gostishchev. - Moscow : GEOTAR-Media, 2020. - 220 c. - ISBN 978-5-9704-5439-8. – Available at: https://www.studentlibrary.ru/book/ISBN9785970454398.html
6. Aseptics : training manual / A. V. Skorodumov, A. V. Andrusenko, P. V. Panfi lov, M. A. Ivanov, T. E. Koshelev, D. A. Yakovlev. — Saint Petersburg : Publishing offi ce of Federal State SZSMU named after I. I. Mechnikov, 2025. — 52 p. https://sdo.szgmu.ru/pluginfile.php/1027309/mod_resource/content/1/%D0%A1%D0%BA%D0%BE%D1%80%D0%BE%D0%B4%D1%83%D0%BC%D0%BE%D0%B2%20%D0%90.%D0%92._%D0%90%D0%A1%D0%95%D0%9F%D0%A2%D0%98%D0%9A%D0%90.pdf
7. Academic case history of surgical patient: Training manual / A.V.Andrusenko, K.V. Sementsov, D.O. Vagner, D.Yu. Boyarinov, A.V. Pertsev. — Saint-Petersburg: Publishing office of Federal State-Funded Educational Institution of Higher Education North-Western State Medical University named after I.I. Mechnikov, 2023. — 40 p. https://sdo.szgmu.ru/pluginfile.php/883856/mod_resource/content/1/Andrusenko%20%D0%90.V._ACADEMIC%20CASE%20HISTORY%20OF%20SURGICAL%20PATIENT.pdf
8. Preparation of patient surgery: training manual / A. V. Skorodumov, A. V. Andrusenko, P. V. Panfi lov, M. A. Ivanov, T. E. Koshelev, D. O. Vagner, N. A. Kryukov. — Saint Petersburg: Publishing offi ce of Federal State SZSMU named after I. I. Mechnikov, 2025. — 56 p. https://sdo.szgmu.ru/pluginfile.php/1025582/mod_resource/content/1/%D0%A1%D0%BA%D0%BE%D1%80%D0%BE%D0%B4%D1%83%D0%BC%D0%BE%D0%B2%20%D0%90.%D0%92._%D0%9F%D0%9E%D0%94%D0%93%D0%9E%D0%A2%D0%9E%D0%92%D0%9A%D0%90%20%D0%91%D0%9E%D0%9B%D0%AC%D0%9D%D0%9E%D0%93%D0%9E%20%D0%9A%20%D0%9E%D0%9F%D0%95%D0%A0%D0%90%D0%A6%D0%98%D0%98.pdf

8.2. Internet sources

Name	Available at
Journal of medical Internet research	http://www.jmir.org
Information and Educational System for Practicing Physicians	http://www.rosmedlib.ru
Russian medical portal	http://www.rosmedportal.com
World Health organization	http://www.who.int

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
.	General surgery issues	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, available at

		https://moodle.szgmu.ru/course/view.php?id=73
	Fundamentals of Traumatology and Injury Surgery	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, available at https://moodle.szgmu.ru/course/view.php?id=73
.	Selected fields of surgery	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, available at https://moodle.szgmu.ru/course/view.php?id=73
.	Surgical infection	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, available at https://moodle.szgmu.ru/course/view.php?id=73

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
Licensed software			
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
Licensed domestically produced software			
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
Freely distributed software			
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	http://www.studmedlib.ru/
3.	EMD «Konsultant vracha»	1 year	Contract № 281/2020-ЭА	http://www.rosmedlib.ru/
4.	ELS «ibooks.ru»	1 year	Contract № 06/2020	https://ibooks.ru
5.	ELS «IPRBooks»	1 year	Contract № 08/2020-ЗК	http://www.iprbookshop.ru/special
6.	ELS «Bookup»	1 year	Contract № 05/2020	https://www.books-up.ru/
7.	ELS «Lan' Publishing»	1 year	Contract № 395/2020-ЭА	https://e.lanbook.com/

10. Material and Technical Support for the Course

Classrooms for lecture-type classes, group and individual consultations, ongoing assessment, and interim assessment of students, equipped with instructional equipment and technical teaching aids:
47 Piskaryovsky Prospect, Bldg. P (Building 17), Room No. 5,
North-Western State Medical University named after I.I. Mechnikov, Ministry of Health of the Russian Federation, Saint Petersburg.
Equipment: chalkboard; instructor's desk and chair; student desks and chairs.
Technical teaching aids: multimedia projector, instructor's laptop, system unit, monitor.

Classrooms for seminar-type classes, group and individual consultations, ongoing assessment, and interim assessment of students, equipped with instructional equipment and technical teaching aids:
47 Piskaryovsky Prospect, Bldg. P (Building 17), Room No. 5,
North-Western State Medical University named after I.I. Mechnikov, Ministry of Health of the Russian Federation, Saint Petersburg.
Equipment: chalkboard; instructor's desk and chair; student desks and chairs.
Technical teaching aids: multimedia projector, instructor's laptop, system unit, monitor.
Special technical teaching aids (for students with disabilities):
Roger Pen (individual wireless transmitter in pen form)

Roger MyLink (receiver for the Roger Pen system) – for students with hearing impairments
IntelliKeys (wired keyboard with Russian Braille layout, matte black finish)
Location: 47 Piskaryovsky Prospect, Bldg. R (Building 9), Rooms 18, 19,
North-Western State Medical University named after I.I. Mechnikov, Ministry of Health of the Russian Federation, Saint Petersburg.

Clinical Sites for Practical Training
Practical classes are conducted at the following clinical bases:
Saint Petersburg I.I. Dzhanelidze Research Institute of Emergency Medicine
(Agreement No. 780/2020-OPP dated 07.08.2020, open-ended)
3A Budapestskaya Street, Saint Petersburg.
City Hospital No. 14, Saint Petersburg
(Agreement No. 194/2018-OPP dated 14.05.2018, open-ended)
19/9 Kosinova Street, Saint Petersburg.

Facilities for self-study, equipped with computers with Internet access and access to the University's electronic information and educational environment:
47 Piskaryovsky Prospect, Bldg. AE (Building 32), Room No. 1;
Bldg. R (Building 9), Rooms 18, 19;
North-Western State Medical University named after I.I. Mechnikov, Ministry of Health of the Russian Federation, Saint Petersburg

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

Course: General Surgery

Saint Petersburg – 2021

1. List of planned learning outcomes

Code of the competence achievement indicator	Learning outcomes (Assessment criteria)	Assessment methods
Indicator 1 GPC-4.1	Knows: the established standards of medical care delivery, the main diagnostic procedures, and medical devices used in clinical practice.	Cases, tests, control questions, academic case history
	Is able to: apply medical devices to accomplish diagnostic tasks.	
	Has the skill of: effectively applying medical devices in various clinical conditions and during diagnostic procedures.	
Indicator 2 GPC-4.2	Knows: the main diagnostic methods, including instrumental techniques, used in the examination of a patient to establish a diagnosis.	Cases, tests, control questions, practical skills, academic case history
	Is able to: apply various diagnostic methods, including instrumental techniques, based on the presumed diagnosis and substantiate their necessity in a specific clinical case.	
	Has the skill of: using various diagnostic methods, including instrumental techniques, to verify the diagnosis.	
Indicator 3 GPC-4.3	Knows the main clinical manifestations and symptom complexes of pathological conditions in surgery, as well as the appropriate diagnostic methods applicable to them.	Cases, tests, control questions, practical skills, academic case history
	Is able to: apply laboratory, instrumental, and specialized diagnostic methods, as well as use consultation reports from relevant medical specialists, to verify the diagnosis.	
	Has the skill of: interpreting the results of laboratory, instrumental, and specialized diagnostic methods, as well as specialist consultations, in clinical practice.	
Indicator 4 GPC-4.4	Knows: the list of essential medical devices and the indications for their use.	Cases, tests, control questions, academic case history
	Is able to: use medical devices in clinical practice.	
	Has the skill of: applying various medical devices in the management of different pathological conditions in surgery.	
Indicator 1 PC-2.1	Knows: the fundamental principles of history taking and methods of objective patient examination, as well as the rules, sequence, and technique of general physical examination (inspection, palpation, percussion, auscultation).	Cases, tests, control questions, practical skills, academic case history
	Is able to: conduct a structured review of systems and perform an objective physical examination of patients.	
	Has the skill of: active history taking and performing a comprehensive physical examination	

	using palpation, percussion, and auscultation techniques.	
Indicator 2 PC-2.2	Knows: the symptom complexes of major surgical conditions, the methods of their diagnosis, and the current regulations governing the provision of medical care for these conditions.	Cases, tests, control questions, academic case history
	Is able to: search for relevant information in current clinical guidelines and apply this information to the diagnosis and treatment of diseases.	
	Has skills in: developing diagnostic and treatment plans for patients with surgical pathology.	
Indicator 3 PC-2.3	Knows: the procedures and indications for referral of a patient to related specialists.	Cases, tests, control questions, academic case history
	Is able to: substantiate the diagnostic and treatment strategy for patients with surgical pathology in accordance with current clinical guidelines.	
	Has skills in: establishing a clinical diagnosis and applying various additional diagnostic methods.	
Indicator 4 PC-2.4	Knows: the concept of differential diagnosis, as well as the main surgical nosologies with similar clinical presentations and their distinguishing features.	Cases, tests, control questions, academic case history
	Is able to: analyze examination data for the purpose of performing a differential diagnosis.	
	Has skills in: applying diagnostic techniques to identify major surgical diseases and conditions.	
Indicator 5 PC-2.5	Knows: the characteristic clinical manifestations of major surgical diseases and conditions.	Cases, tests, control questions, academic case history
	Is able to: use information from clinical guidelines and the current International Statistical Classification of Diseases and Related Health Problems (ICD).	
	Has skills in: examining patients with surgical pathology.	

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

2.1. Examples of input test

1. Basic Rules and Structure for Writing the Case History of a Surgical Patient
2. How to Properly Describe the Patient's Complaints?
3. Content of the Section "History of Present Illness" and Guidelines for Its Preparation
4. Content and Structure of the Section "Past Medical and Social History" (History of Life)
5. Content of the Section "Status Praesens Objectivus" (Objective Clinical Examination)

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

Grade	Description
	met; no response.

2.2. Test examples:

Indicator 1 GPC-4.1; Indicator 4 PC-2.4; Indicator 5 PC-2.5
Question № 1
The most common causes of systemic arterial embolism are:
1) ileofemoral thrombosis
2) nonspecific aortoarteritis
3) thromboangiitis obliterans
4) ischemic heart disease

Indicator 2 PC-2.2; Indicator 1 GPC-4.1; Indicator 3 GPC-4.3
Question № 2
A hemoglobin concentration of 80 g/L and an increased reticulocyte count may occur with:
1. anemia due to chronic renal failure
2. aplastic anemia
3. **posthemorrhagic anemia**
4. acute leukemia

Indicator 4 PC-2.4; Indicator 5 PC-2.5; Indicator 3 PC-2.3
Question № 3
What percentage of body weight does the circulating blood volume (CBV) make up in a healthy person:
1. 6%.
2. 9%.
3. 18%.
4. 35%.

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. Examples of the algorithms for practical skills demonstrations

Indicator 2 GPC-4.2; Indicator 3 GPC-4.3; Indicator 1 PC-2.1
1. Алгоритм демонстрации практических навыков

№	Student's action
1	Established rapport with the patient (greeting, introduction, offering a seat)
2	Clarified the patient's current condition and well-being
3	Performed correct hand hygiene prior to examination
4	Assessed the level of consciousness (alert, stupor, sopor, coma).
5.	Assessed the overall clinical condition of the patient (stable/satisfactory, moderate severity, severe, extremely severe/critical).
5	Correctly performed temporary control of bleeding (using a tourniquet / digital pressure / maximal limb flexion / application of a pressure dressing).

№	Student’s action
6	Performed hygienic hand antisepsis after the procedure.

Evaluation criteria, practical skills assessment scale

Grade		Description
excellent	5	Demonstrates thorough knowledge of the technique for performing practical skills, including indications, contraindications, possible complications, standards and regulations; independently performs practical skills accurately and without errors.
good	4	Demonstrates good knowledge of the technique for performing practical skills, including indications, contraindications, possible complications, standards and regulations; independently performs practical skills with minor inaccuracies (non-critical errors), which are identified and promptly corrected independently.
satisfactory	3	Demonstrates knowledge of the basic principles of performing practical skills, including indications, contraindications, possible complications, standards and regulations; performs practical skills with some errors that can be corrected following instructor guidance.
unsatisfactory	2	Does not demonstrate knowledge of the technique for performing practical skills, including indications, contraindications, possible complications, standards and regulations; is unable to independently perform practical skills or performs them with significant errors.

2.4 Sample cases

Indicator 4 GPC-4.4; Indicator 1 GPC-4.1; Indicator 3 GPC-4.3

Case №7

A 31-year-old man, defending himself from a knife attack, offered his left hand. A deep wound measuring 6 x 3 cm is present in the lower third of the palmar surface of his left forearm, from which a bright, pulsating stream of blood up to 3 mm in diameter is escaping.

Questions

1) Determine the type of bleeding.
2) Choose a method for temporarily stopping the bleeding.
3) Choose a method for permanently stopping the bleeding.
4) Consequences of applying a tourniquet to the middle third of the upper arm.
5) Principles of treating an accidental wound.

Indicator 4 PC-2.4; Indicator 5 PC-2.5; Indicator 3 PC-2.3

Case №9

A 25-year-old man was stabbed in the neck during a street fight. A deep wound measuring 2 x 0.5 cm is present in the upper third of the sternocleidomastoid muscle on the right side, from which a pulsating stream of bright red blood is flowing.

Questions

1) Identify the type of bleeding.
2) Indicate which vessels may be damaged.
3) What anatomical structures may also be damaged?
4) Select a method for temporary bleeding control.
5) Select a method for permanent bleeding control.

Indicator 2 PC-2.2; Indicator 1 GPC-4.1; Indicator 3 GPC-4.3; Indicator 5 PC-2.5.

Case №14

A 30-year-old man was running across the street in an unauthorized area and was struck by a car. The main impact was on the left upper quadrant. The patient stood up on his own, felt well, and left the scene of the accident. An hour later, his condition deteriorated sharply: dizziness, severe weakness, and loss of consciousness developed. Physical examination: pale skin, heart rate 120 bpm, blood pressure 80/40 mmHg, abrasion in the left upper quadrant, and dullness in the sloping areas of the abdomen.

Questions

1) Formulate a presumptive diagnosis.
2) Clinical diagnostic methods.
3) Prescribe additional tests.
4) Specify a method for stopping the bleeding.
5) Determine a possible method for correcting blood loss.

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.

2.5. Sample questions for oral interview

Indicator 1 GPC-4.1, Indicator 2 GPC-4.2, Indicator 3 GPC-4.3, Indicator 4 GPC-4.4

1. Preoperative period. Objectives. Preoperative patient preparation. Determining preoperative risk.
2. Hemotransfusion reactions and blood transfusion complications. Clinical manifestations. Prevention. Treatment.
3. Chronic arterial circulatory disorders of the extremities. Causes, clinical features, course, and outcomes.

Indicator 1 PC-2.1, Indicator 2 PC-2.2, Indicator 3 PC-2.3, Indicator 4 PC-2.4, Indicator 5 PC-2.5

1. Tumor process: etiology, pathogenesis (theories of tumor development). Tumor classification.

2. Traumatic shock. Pathogenesis. Classification. Clinical presentation. Treatment principles.

3. Surgical debridement of wounds. Types, indications, stages.

4. The body's response to bleeding. The mechanism of blood loss compensation. Factors that spontaneously stop bleeding.

5. Fracture symptomatology. Fracture diagnosis. Life-threatening complications of fractures and their prevention.

6. Chemical, radiation, and botanical burns. Clinical presentation and treatment.

7. Sterilization of dressings: methods, sterilization monitoring, requirements.

8. Osteomyelitis: classification, pathogenesis, clinical course, treatment.

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.

2.8 Academic case history

Indicator 1 GPC-4.1, Indicator 2 GPC-4.2, Indicator 3 GPC-4.3, Indicator 4 GPC-4.4, Indicator 1 PC-2.1, Indicator 2 PC-2.2, Indicator 3 PC-2.3, Indicator 4 PC-2.4, Indicator 5 PC-2.5

OUTLINE OF THE ACADEMIC CASE HISTORY OF A SURGICAL PATIENT

I. Passport data.

II. Complaints.

This section includes the patient’s complaints related to the principal disease for which the patient has been admitted to the surgical clinic.

The complaints should be described in detail and presented in a logical sequence. During the interview, the student must actively elicit symptoms that may be associated with the given surgical pathology but were not mentioned by the patient for any reason.

At the same time, it is unnecessary to list all complaints reported by the patient, since some of them may be related to comorbid conditions. Such complaints should be described in the corresponding sections of the case history (respiratory system, cardiovascular system, etc.).

It should be kept in mind that complaints at admission subsequently become part of the History of Present Illness and must be reflected in the appropriate section.

III. History of present illness.

This section must provide a detailed description of the onset, course, and development of the current disease from its first manifestations up to the moment of examination by the student under supervision.

The student should attempt to identify factors that may have contributed to the etiology and pathogenesis of the disease, demonstrate the dynamics of clinical symptoms, note the development of complications, and reflect the results of previously administered treatment.

It is also necessary to actively elicit symptoms that the patient may not have noticed or may consider insignificant.

Thus, this section should not be a simple transcription of the patient's narrative. All information obtained must undergo clinical evaluation and be presented in accordance with the correct understanding of the mechanisms underlying the development of the disease.

IV. Past medical and social history.

This section includes brief biographical information presented in chronological order, from birth up to hospital admission: place of residence and family background, early childhood development, education, beginning of independent employment, and subsequent occupational history.

For women: menstruation history, marital status, pregnancies, deliveries, abortions.

Alcohol, tobacco, and substance use.

Past illnesses.

Working and Living Conditions:

a) working conditions, occupational characteristics, occupational hazards;

b) housing conditions;

c) dietary habits: qualitative and quantitative characteristics of nutrition and its regularity.

Family History:

Presence in the family of syphilis, psychiatric disorders, metabolic diseases, hemophilia, tuberculosis, malignant neoplasms, alcoholism, etc.

V. Present Condition of the Patient (Status Praesens Objectivus)

General condition: satisfactory, moderate severity, severe; body temperature.

Position in bed: active, passive, forced.

Body build: constitutional type, height, weight.

Skin and mucous membranes: color (normal, pale, jaundiced, "earthy," cyanotic), pigmentation or depigmentation, scars, excoriations, hemorrhages, rashes, vascular "spider" angiomas, elasticity, moisture.

Subcutaneous fat: degree of development (moderate, decreased, excessive), areas of predominant fat deposition. Presence of pastosity or edema, their localization and extent.

Lymph nodes: palpation of submandibular, cervical, supraclavicular, infraclavicular, epitrochlear, axillary, and inguinal nodes. If enlarged — size, consistency, tenderness, mobility, fixation to each other or to the skin.

Muscles: degree of development (moderate, poor, well developed).

Joints: changes in configuration, tenderness and crepitus on movement, range of active and passive motion.

Bones: deformities, tenderness on palpation. Thickening of distal phalanges ("drumstick fingers").

Examination and palpation of the thyroid gland and mammary glands (in cases of thyroid or breast disease, these organs are described in detail in the special section “Status Localis”).

VI. Respiratory system.

* Here and in the following sections, parts of the case history marked with “++” are completed only in the presence of the corresponding pathology.

++ Complaints

++ 1. Chest pain: intensity, character, radiation, relation to breathing.

++ 2. Dyspnea: character, time of onset, duration, episodes of choking.

++ 3. Cough: time of onset, severity, duration, character (dry or productive).

++ 4. Sputum: time of appearance, amount, color, odor, presence of blood. Dependence of sputum production on body position.

++ 5. Nasal and pulmonary bleeding: frequency and duration.

Examination.

Breathing: nasal, free, obstructed.

Voice: hoarseness, aphonia.

Chest: shape, symmetry, deformities, participation in breathing.

Respiratory chest excursion.

++ Dilatation of superficial venous collaterals of the chest wall.

Breathing: depth, type, rhythm. Respiratory rate per minute.

Palpation.

+ Identification of sore areas.

++ Assessment of chest wall resistance.

++ Assessment of vocal fremitus.

Percussion.

+ Topographic percussion:

a) Determination of the upper lung borders: height of lung apices above the clavicle (in cm); posteriorly in relation to the spinous process of the 7th cervical vertebra. Percussion of Krenig’s fields and their changes.

b) Determination of the lower lung borders along the following lines: midclavicular, anterior axillary, posterior axillary, scapular, paravertebral. On the left side, examination begins from the anterior axillary line. Mobility of the lower lung border is determined along the scapular line bilaterally.

Comparative percussion. Character of percussion sound: normal, tympanic, dull, hyperresonant (“box” sound).

Auscultation.

Breath sounds: vesicular, bronchial, amphoric, etc.

Rales: dry, moist (fine-, medium-, coarse-bubbling).

+ Crepitation: pleural friction rub.

+ Assessment of bronchophony over symmetrical areas of the chest.

Functional Tests.

+ Breath-holding tests: Stange and Genchi tests.

VII. Cardiovascular system.

+ Complaints.

+ 1. Dyspnea: character and time of onset.

+ 2. Palpitations, sensation of irregular heartbeat.

+ 3. Pain in the precordial area and retrosternal region: character, duration, radiation.

Neck examination: condition of arteries and veins, pathological pulsation.

+ Examination of the precordial area: cardiac hump, pathological pulsation, apical impulse and its characteristics, cardiac impulse (location and character)

Palpation.

Palpation of the apical and cardiac impulses, their characteristics.

Assessment of systolic and diastolic thrills.

Percussion.

Determination of right, left, and upper borders of relative cardiac dullness (in cm).
Determination of right and left borders of absolute cardiac dullness.
Cardiac configuration.
Transverse diameter of the vascular bundle.

Auscultation.

Heart sounds: loud, muffled, faint.

+ + Detailed characteristics of heart sounds.

++ Rhythm and rhythm disturbances: tachycardia, bradycardia, extrasystole, atrial fibrillation, etc.

++ Murmurs and their characteristics: the best location for auscultation. If the limits of relative and absolute cardiac dullness are normal, a brief note is added to the patient's medical record: "Heart limits within normal limits."

Murmurs and their conduction. Changes in the character and strength of a murmur depending on the patient's position and physical activity.

++ Pericardial friction rub.

Vascular Examination. Pulse.

++ The condition of the vascular wall of the peripheral arteries: elasticity, tenderness. The area of greatest tenderness, tortuosity, and visible pulsation are examined last (the presence and degree are determined). Properties of the radial artery pulse: synchrony, frequency, tension, and volume. Pulse deficit.

Pulse examination of the carotid, femoral, and popliteal arteries of the feet. Blood pressure.

The results of examination of the arteries and veins of the lower extremities of patients with vascular diseases are submitted to a special section called Status Localis.

VIII. Digestive systems.

++ Complaints.

++ 1. Bitterness in the mouth, bad breath.

++ 2. Appetite (poor, perverted, food aversion).

++ 3. Swallowing (difficulty, painful).

++ 4. Abdominal pain: location, nature, radiation, dependence on food intake, duration, relationship with swallowing, physical activity; remedies for relief.

++ 5. Bloating.

++ 6. Dyspeptic symptoms: nausea, heartburn, belching, vomiting, time of onset, nature of vomit (admixture of bile, fresh blood, liquid the color of "coffee grounds," presence of food residue from the previous day in the vomit).

++ 7. Stool: constipation, persistent stool and gas.

++ 8. Character of stool: "tarry" stool mixed with blood, discharge of unmixed blood

With stool, stool shape ("ribbon-shaped," "sheep-like")

Oral examination.

Tongue: color, moisture, presence of plaque,

++ glossitis,

++ cracks, ulcers.

++ Teeth: looseness, caries, dentures, etc.

++ Gums: color, looseness, ulcers, necrosis.

++ Soft palate and hard palate: color, plaque, etc.

+ + Tonsils.

Abdominal examination.

Abdominal shape, size, inhalation, asymmetry, development of venous collaterals, visible gastric and intestinal peristalsis.

++ Measuring abdominal circumference at the umbilicus.

++ Determining localized abdominal tenderness using the "cough impulse" symptom.

++Postoperative sutures, scars, location, shape, and size.

Palpation.

Determination of pain, abdominal muscle tension (diffuse and localized), detection of hernias and divergence of the rectus abdominis muscles, and the shape and size of the inguinal rings. If the patient's primary condition is an anterior abdominal wall hernia, it is described in a special section

" Status Localis."

If a pathological mass (tumor, inflammatory infiltrate) is present in the abdominal cavity, a detailed description is required (location, size, surface type, consistency, tenderness, mobility, etc.).

++ In acute surgical diseases of the abdominal organs, deep palpation begins in the area of the abdomen where pain is least pronounced. The area of greatest pain is examined last (the presence and severity of muscle tension,

Shchetkin-Blumberg sign, their location and prevalence are determined). ++ The symptoms of Rovsing, Sitkovsky, Obraztsov, Voskresensky (when examining the appendix), Mayo-Robson and Voskresensky (when examining acute pancreatitis), etc. are examined.

Auscultation.

The nature of peristalsis is determined (increased, sluggish, ringing, resonant).

Percussion.

++Percussion reveals the presence of free gas in the abdominal cavity (disappearance of liver dullness). Presence of free fluid.

++Percussion.

Detection of splashing sounds (in the stomach, in the intestines).

Liver and gallbladder.

Liver dimensions according to Kurlov: along the midclavicular line, midline, and along the left costal margin. Liver edge (shape, consistency), surface (smooth, bumpy, granular). Palpation of the gallbladder area: if enlarged, determine size, consistency, and tenderness. Ortner's sign and phrenicus sign are examined. Spleen. Splenic edge (thin, rounded), surface (smooth, bumpy, spleen size).

If no pathology is present, the medical history should include the following: "liver, gallbladder, and spleen are not palpable."

IX. Urinary system.

X. Neuropsychiatric status.

XI. Status Localis.

Status localis is described in the following conditions:

– external anterior abdominal wall hernias;

– thyroid and breast diseases;

– acute and chronic vascular diseases of the extremities;

– hemorrhoids.

Inspection, palpation, percussion, auscultation, and specific diagnostic tests must be described in detail (cough impulse sign, marching test, Troyanov–Trendelenburg test, etc.).

For varicose veins — plantar ischemia sign, white spot sign, etc.

For obliterating arterial diseases — specific vascular signs.

For thyrotoxicosis — ocular signs.

XII. Rectal examination.

Sphincter tone (normal, increased, sphincter paresis).

Prostate (size, surface, tenderness).

Rectal wall palpation (masses, anterior wall bulging and tenderness).

Stool on glove: ++ fresh blood, ++ mucus, ++ tarry stool, pale stool.

Formed stool of normal color.

XIII. Preliminary diagnosis.

Evaluation criteria, academic case history grading scale

Grade		**Description**
Excellent	5	All requirements for writing and defending the case history have been fulfilled: the diagnosis is correctly formulated; the logical structure of data presentation is maintained; all sections of the case history are comprehensively completed; the diagnostic and treatment plan is described in detail. All questions related to the case history are answered correctly and comprehensively.
Good	4	The main requirements for writing and defending the case history have been fulfilled; however, minor shortcomings are present. In particular, there are inaccuracies in the presentation of material; logical consistency in reasoning is partially lacking; there are minor formatting omissions;

Grade		Description
		answers to additional questions during the defense are incomplete.
Satisfactory	3	There are significant deviations from the requirements for writing the case history; the sequence of sections may be slightly нарушен (disrupted) or some sections are presented incompletely; factual errors are made when answering additional questions.
Unsatisfactory	2	The case history is incorrectly formatted or the preliminary diagnosis is absent; sections of the case history are omitted or their order is substantially disrupted; there are major errors in the content of sections, or a significant portion of the sections is presented incompletely.

3. Ongoing assessment

Ongoing assessment includes: tests, control questions, solving cases, writing academic case history, practical skills demonstration.

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

4.1. Sample list of control questions for exam:

Indicator 1 GPC-4.1; Indicator 4 GPC-4.4

1. Hospital-acquired infection in surgical hospitals: determining factors, types, and prevention.

Indicator 3 GPC-4.3; Indicator 4 GPC-4.4

2. Definition of hemorrhage. Main classifications of hemorrhage. Secondary hemorrhage: causes, diagnosis, and treatment.

Indicator 2 GPC-4.2; Indicator 3 GPC-4.3; Indicator 1 PC-2.1; Indicator 3 PC-2.3

3. Tumor process: etiology and pathogenetic features (theories of tumor development). Classification of tumors.

Indicator 2 PC-2.2; Indicator 4 PC-2.4; Indicator 5 PC-2.5

4. Peritonitis: definition, classification, pathogenesis, and principles of treatment of diffuse purulent peritonitis.

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

Grade		Description
		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 3 GPC-4.3; Indicator 2 PC-2.2; Indicator 4 PC-2.4; Indicator 5 PC-2.5

Case № 1

Complaints of severe lower back pain on the left side, which began two days ago after exposure to cold, with a temperature rise to 39.6°C and chills. Palpation reveals tenderness in the left kidney area, and Pasternatsky's sign is positive on the left. Blood tests reveal leukocytosis of 20,000 and ESR of 35 mm/hour. Urine is cloudy, revealing pyuria. A plain radiograph of the kidneys does not reveal any stone shadows, and the left kidney is slightly enlarged.

Questions:

1. Preliminary diagnosis.
2. What indicates this diagnosis?
3. Confirmation of the diagnosis.
4. Treatment strategy.
5. Prevention of complications.

Indicator 2 GPC-4.2; Indicator 3 GPC-4.3; Indicator 1 PC-2.1; Indicator 3 PC-2.3

Case № 2

A 55-year-old female patient was admitted to the urology department complaining of painless macrohematuria. Physical examination: malnutrition, and an enlarged, firm left kidney. A plain urogram reveals no radiopaque stones; the left kidney is large and irregular in outline. Preliminary diagnosis. Which tests are most valuable for confirming the diagnosis?

Questions:

1. Preliminary diagnosis.
2. What indicates this diagnosis?
3. Confirmation of the diagnosis.
4. Treatment strategy.
5. Prevention of complications.

Indicator 1 GPC-4.1; Indicator 4 GPC-4.4; Indicator 1 PC-2.1; Indicator 3 PC-2.3

Case № 3

After falling onto the tracks in the lumbar region, the patient developed blood in his urine. Upon admission: blood-tinged urine, lumbar pain, more pronounced on the right side. The kidneys are not palpable; palpation of the right kidney is painful. Pasternatsky's sign is positive on the right side. Preliminary diagnosis. Physician's approach.

Questions:

1. Preliminary diagnosis.
2. What indicates this diagnosis?
3. Confirmation of the diagnosis.
4. Treatment approach.
5. Prevention of complications.

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.

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. 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.