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 Medicine»

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 Medicine** 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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Head of the Department _____ / Saiganov S.A./

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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

Выберите элемент.

The aim of mastering the discipline Clinical Medicine is to develop students' professional competencies, further enhance interdisciplinary clinical thinking, and enable the acquisition of theoretical knowledge, practical skills, and clinical abilities in the diagnosis, differential diagnosis, prevention, and treatment of diseases of internal organs. The discipline takes into account patients' lifestyle characteristics, professional activities, and comorbid conditions and prepares students for independent clinical practice in healthcare institutions.

2. Место 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
General Professional Competencies GPC – 7 Able to prescribe treatment and monitor its effectiveness and safety.	Indicator 1 GPC-7.1 Prescribes a therapeutic and protective regimen and determines the place and type of treatment taking into account the severity of the patient's condition. Indicator 2 GPC-7.2 Selects medicinal products, dosage forms, and routes of administration, and carries out rational substitution of medicinal products based on the patient's condition. Indicator 3 GPC-7.3 Predicts adverse drug reactions and implements measures for their prevention. Indicator 4 GPC-7.4 Monitors the effectiveness and safety of prescribed treatment at all stages of its implementation.
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 spe-

	cialists 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).
Professional Competencies PC-3 Able to manage and treat patients requiring medical care.	Indicator 1 PC-3.1 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.

Code of the competence achievement indicator	Learning outcomes (Assessment criteria)	Assessment methods
Indicator 1 GPC-7.1	**Knows:** the etiology and pathogenesis of diseases of internal medicine; the impact of environmental factors, nutrition, lifestyle, and violations of sanitary and hygienic standards on the development of diseases of internal medicine and their complications; the clinical presentation and features of the course of diseases and their complications in different age groups; complications of diseases requiring emergency hospitalization; principles and methods of conservative treatment and prevention of diseases of internal medicine.	Cases, control questions
	Able to: assess the severity of a patient's condition based on medical history taking, physical examination, and objective clinical findings; interpret the results of laboratory and diagnostic investigations.	
	Has skills in: collecting medical history and interviewing the patient; performing a physical examination; interpreting the results of laboratory and diagnostic investigations; prescribing a therapeutic and protective regimen.	
Indicator 2 GPC-7.2	**Knows:** the principles of conservative treatment; indications and	Cases, control questions

	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.	
	Able to: 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.	
	Has skills: of planning and prescribing conservative pharmacological therapy for surgical patients depending on the nosological entity.	
Indicator 3 GPC-7.3	**Knows:** 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.	Cases, control questions
	Able to: 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.	
	Has skills in: prescribing conservative pharmacological therapy for patients, taking into account potential adverse effects of drug therapy.	
Indicator 4 GPC-7.4	**Knows:** the principles of management of 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 patients, depending on the nosological entity, stage of the disease, clinical course, patient's condition, and the presence of comorbidities.	Cases, control questions
	Able to: assess the condition of a patient; identify complications and determine their severity	
	Has skills in: monitoring the effectiveness and safety of prescribed treatment at all stages of patient management.	
Indicator 1 PC-	**Knows:**	Control questions, tests,

2.1	the methodology of collecting patient complaints, medical history data, and conducting clinical examination.	cases, course work, academic case history
	Able to: analyze data obtained from patient interviews and physical examination in order to recognize the patient's condition or establish the presence or absence of disease; identify the leading clinical syndrome of the disease.	
	Has skills in: performing patient interviews and physical examinations and interpreting the data obtained.	
Indicator 2 PC-2.2	**Knows:** the physiology and pathophysiology of processes underlying the development of major clinical symptoms and syndromes, as well as methods for confirming their presence.	Control questions, tests, cases, course work, academic case history
	Able to: analyze clinical data obtained during patient assessment in the context of underlying pathophysiological mechanisms.	
	Has skills in: formulating a preliminary diagnosis; developing a diagnostic workup plan in accordance with current standards of medical care and clinical guidelines.	
Indicator 3 PC-2.3	**Knows:** the physiology and pathophysiology of processes underlying comorbid conditions.	Control questions, tests, cases, course work, academic case history
	Able to: determine indications for referral to specialist physicians in order to provide specialized inpatient medical care.	
Indicator 4 PC-2.4	**Knows:** the pathophysiology of processes underlying the development of major clinical symptoms and syndromes.	Control questions, tests, cases, course work, academic case history
	Able to: interpret data obtained from patient interviews and physical examination, as well as results of laboratory, diagnostic, and other morphological investigations, in order to establish a diagnosis.	
	Has skills in: performing differential diagnosis of major clinical syndromes.	
Indicator 5 PC-2.5	**Knows:** the physiology and pathophysiology of processes underlying the development of major clinical symptoms and syndromes, as well as methods for confirming their presence; the main approaches to pathogenetic management of these processes through therapeutic interventions in diseases of internal medicine.	Control questions, tests, cases, course work, academic case history
	Able to: analyze all clinical, laboratory, and diagnostic data obtained during patient assessment from a pathophysiological perspective;	

	formulate a clinical diagnosis in accordance with the International Statistical Classification of Diseases and Related Health Problems (ICD).	
	Has skills in: establishing a clinical diagnosis in pathological conditions and common diseases of internal medicine in accordance with the International Statistical Classification of Diseases and Related Health Problems (ICD).	
Indicator 1 PC-3.1	**Knows:** patient management strategies for various diseases of internal medicine; therapeutic treatment programs for diseases of internal medicine; algorithms for selecting pharmacological and non-pharmacological treatment methods based on the diagnosis and individual patient characteristics; indications and contraindications for the use of medicinal products.	Control questions, tests, cases, course work, academic case history
	Able to: assess the patient's condition and prescribe appropriate treatment; predict the course of the disease; anticipate beneficial and adverse effects of pharmacological therapy in the treatment of diseases of internal medicine.	
	Has skills in: prescribing appropriate treatment in accordance with the established diagnosis; selecting pharmacological and non-pharmacological therapy for patients with the most common diseases of internal medicine.	

4. Scope of the course and types of learning activities

Type of learning activity	Workload	Semesters	
		9	10
Contact hours (student–instructor interaction)	**202**	**102**	**100**
Classroom based work:	198	102	96
Lectures (L)	30	18	12
Practical classes (PC)	168	84	84
Self-study:	158	78	**80**
During the period of theoretical instruction	126	78	48
Preparation for the examination	32		32
Interim assessment: exam, including passing and group consultations	4		4
Total workload: Academic hours	**360**		
Credit units	**10**		

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.	Cardiology	Atherosclerosis. Etiopathogenesis. Clinical manifestations depending on localization. Therapy. Chronic forms of coronary heart disease. Acute coronary syndrome. Patient management tactics. Heart rhythm and conduction disorders. Acute and chronic heart failure. Inflammatory diseases of the myocardium and pericardium.	GPC-7 PC-2 PC-3
2.	Pulmonology	Examination methods for pulmonary diseases. Differential diagnosis of pulmonary tissue infiltration syndrome and rounded formations in the lung tissue and mediastinum. Management of patients with pleural effusion. Obstructive pulmonary diseases. Respiratory failure: definition, classification, approaches to diagnosis and therapy.	GPC-7 PC-2 PC-3
3.	Gastroenterology	Differential diagnosis of major esophageal and gastric diseases Differential diagnosis of major liver diseases Differential diagnosis and treatment strategies for diseases of the biliary tract and pancreas Inflammatory bowel disease. Ulcerative colitis. Crohn's disease. Differential diagnosis of major bowel diseases. Diseases of the colon and rectum	GPC-7 PC-2 PC-3
4.	Nephrology	Research methods in nephrology. Differential diagnosis of urinary syndrome. Chronic glomerulonephritis. Nephrotic syndrome. Amyloidosis. Chronic kidney disease.	GPC-7 PC-2 PC-3
5.	Rheumatology	Rheumatoid arthritis. Gout. Osteoarthritis. Systemic lupus erythematosus. Systemic vasculitis	GPC-7 PC-2 PC-3
6.	Hematology	Differential Diagnosis of Anemia. Lymphoproliferative Diseases. Chronic Lymphocytic Leukemia. Hodgkin's and Non-Hodgkin's Lymphomas. Myeloproliferative Diseases. Chronic Myeloid Leukemia, Idiopathic Myelofibrosis. Polycythemia. Myeloma	GPC-7 PC-2 PC-3

5.2. Lecture plan

№	Title of the course section	Lecture topics	Active learning methods	Workload (academic hours)
1.	Pulmonology	Methods: Bacterial pneumonia. Differential diagnosis of pulmonary tissue infiltration syndrome and rounded formations in the lung tissue and mediastinum. Examinations for pulmonary diseases. Acute and chronic bronchitis.	Lecture presentation	2
2.		Obstructive pulmonary diseases. COPD. Pulmonary emphysema. Bronchial asthma. Bronchiectasis. Obstructive sleep apnea. Respiratory failure: definition, classification, approaches to diagnosis and therapy	Lecture presentation	2
3.	Cardiology	Atherosclerosis. Etiopathogenesis. Clinical mani-	Lecture	2

		festations depending on location. Hyperlipidemia therapy.	presentation	
4.		Chronic forms of coronary heart disease. Angina pectoris, diagnosis and treatment	Lecture presentation	2
5.		Chronic heart failure. Diagnosis and treatment	Lecture presentation	2
6.	Nephrology	Chronic kidney disease	Lecture presentation	2
7.		Amyloidosis. Nephrotic syndrome	Lecture presentation	2
8.	Rheumatology	Differential diagnosis of articular syndrome	Lecture presentation	2
9.		Systemic vasculitis	Lecture presentation	2
10.	Gastroenterology	Differential diagnosis of major esophageal and gastric diseases	Lecture presentation	2
11.		Differential diagnosis of major liver diseases	Lecture presentation	2
12.		Differential diagnosis of major intestinal diseases. Crohn's disease. Ulcerative colitis.	Lecture presentation	2
13.	Hematology	Differential diagnosis of anemia	Lecture presentation	2
14.		Lymphoproliferative diseases. Chronic lymphocytic leukemia. Hodgkin's and non-Hodgkin's lymphomas	Lecture presentation	2
15.		Myeloproliferative diseases. Chronic myelogenous leukemia, idiopathic myelofibrosis. Polycythemia	Lecture presentation	2
		Total:		30

5.3. Practical classes plan

№	Title of the course section	Practical class topic	Active learning methods	Assessment	Workload (academic hours)
1.	Cardiology	ECG analysis algorithm. Main ECG syndromes.	Group discussion	Control question, tests, cases	4
2.		IHD: angina.	Group discussion	Control question, tests, cases	4
3.		IHD: acute coronary syndrome.	Group discussion	Control question, tests, cases	4
4.		IHD: acute myocardial infarction.	Group discussion	Control question, tests, cases	4

5.		Bradystolic rhythm disorders: Diagnosis and treatment.	Group discussion	Control question, tests, cases	4
6.		Tachystolic supraventricular rhythm disorders: Diagnosis and treatment.	Group discussion	Control question, tests, cases	4
7.		Tachystolic ventricular rhythm disorders: Diagnosis and treatment.	Group discussion	Control question, tests, cases	4
8.		Congenital heart defects in adults.	Group discussion	Control question, tests, cases	4
9.		Acquired heart defects: Patient management.	Group discussion	Control question, tests, cases	4
10.		Myocarditis. Pericarditis.	Group discussion	Control question, tests, cases	4
11.		Primary and secondary cardiomyopathies.	Group discussion	Control question, tests, cases	4
12.		Symptomatic arterial hypertension.	Group discussion	Control question, tests, cases	4
13.		Differential diagnosis and treatment of arterial hypertension.	Group discussion	Control question, tests, cases	4
14.		Acute and chronic heart failure.	Group discussion	Control question, tests, cases	4
15.		Differential diagnosis of edema and ascites.	Group discussion	Control question, tests, cases	4
16.	Nephrology	Differential diagnosis of urinary syndrome. Basic research methods in nephrology.	Group discussion	Control question, tests, cases	4
17.		Tubulointerstitial kidney diseases. Chronic pyelonephritis.	Group discussion	Control question, tests, cases	4
18.		Chronic glomerulonephritis.	Group discussion	Control question, tests, cases	4
19.		Nephrotic syndrome. Amyloidosis.	Group discussion	Control question, tests, cases	4
20.		Chronic kidney disease. Chronic glomerulonephritis.	Group discussion	Control question, tests, cases	4
21.		Rheumatoid arthritis.	Group discussion	Control question, tests, cases	4
22.		Gout. Osteoarthritis.	Group discussion	Control question, tests, cases	4
23.		Systemic lupus erythematosus.	Group discussion	Control question, tests, cases	4
24.		Systemic vasculitis.	Group discussion	Control question, tests, cases	4
25.	Pulmonology	Bacterial pneumonia. Differential diagnosis of pulmonary infiltration syndrome.	Group discussion	Control question, tests, cases	4
26.		Lung cancer. Differential diagnosis of round lesions	Group discussion	Control question, tests, cases	4

		in lung tissue			
27.		Pleural effusion.	Group discussion	Control question, tests, cases	4
28.		COPD. Chronic bronchitis.	Group discussion	Control question, tests, cases	4
29.		Bronchial asthma.	Group discussion	Control question, tests, cases	4
30.		Interstitial lung diseases.	Group discussion	Control question, tests, cases	4
31.	Gastroenterology	Main diseases of the esophagus and stomach	Group discussion	Control question, tests, cases	4
32.		Differential diagnosis of jaundice	Group discussion	Control question, tests, cases	4
33.		Differential diagnosis and treatment strategies for diseases of the biliary tract and pancreas	Group discussion	Control question, tests, cases	4
34.		Chronic hepatitis	Group discussion	Control question, tests, cases	4
35.		Inflammatory bowel disease: Ulcerative colitis, Crohn's disease	Group discussion	Control question, tests, cases	4
36.		Diseases of the colon and rectum	Group discussion	Control question, tests, cases	4
37.	Hematology	Aplastic anemia and partial aplasia. Agranulocytosis.	Group discussion	Control question, tests, cases	4
38.		Differential diagnosis of anemias.	Group discussion	Control question, tests, cases	4
39.		Chronic lymphocytic leukemia. Hodgkin's and non-Hodgkin's lymphomas.	Group discussion	Control question, tests, cases	4
40.		Myeloproliferative diseases: Chronic myelogenous leukemia, idiopathic myelofibrosis, polycythemia.	Group discussion	Control question, tests, cases	4
41.		Multiple myeloma.	Group discussion	Control question, tests, cases	4
42.		Hemorrhagic diathesis.	Group discussion	Control question, tests, cases	4
					168

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	Cardiology	Working with lecture materials, working	Tests, oral interview,	24

		with academic literature, writing academic case history, preparation of course work.	course work, academic case history	
2	Pulmonology	Working with lecture materials, working with academic literature, writing academic case history, preparation of course work.	Tests, oral interview, course work, academic case history	20
3	Gastroenterology	Working with lecture materials, working with academic literature, writing academic case history, preparation of course work.	Tests, oral interview, course work, academic case history	20
4	Nephrology	Working with lecture materials, working with academic literature, writing academic case history, preparation of course work.	Tests, oral interview, course work, academic case history	24
5	Rheumatology	Working with lecture materials, working with academic literature, writing academic case history, preparation of course work.	Tests, oral interview, course work, academic case history	18
6	Hematology	Working with lecture materials, working with academic literature, writing academic case history, preparation of course work.	Tests, oral interview, course work, academic case history	20
			Total:	126
			Examination preparation:	32

5.6.1. Course work topics

1. Bronchial obstruction syndrome with the development of hypoventilation, telelectasis, and emphysema.
2. Algorithm for differential diagnostic workup in pulmonary tissue infiltration syndrome (bacterial pneumonia, lung tumors, tuberculosis).
3. Management of community-acquired pneumonia in the elderly.
4. Primary prevention of cardiovascular diseases in adults.
5. Treatment of cardiovascular diseases (hypertension, heart defects in pregnant women).
6. Risk factors and prevention of pulmonary embolism.
7. Metabolic syndrome. Features of antihypertensive therapy.
8. Modern diagnostic methods in cardiac patients.
9. Hyperlipidemia: diagnosis, treatment, and prevention.
10. Anticoagulants in therapeutic practice.
11. Heart pain: diagnostic workup algorithm.
12. Pharmacotherapy of acid-related gastrointestinal diseases.
13. Irritable bowel syndrome: clinical features, diagnosis, and treatment.
14. Differential diagnosis of joint pain (osteoarthritis, gout, rheumatoid arthritis).
15. Differential diagnosis of jaundice.
16. Diagnostic workup algorithm for anemia.
17. Differential diagnosis of urinary syndrome.
18. Gastrointestinal bleeding. Examination plan and emergency treatment.
19. Diagnostic workup algorithm for enlarged lymph nodes.
20. Therapeutic nutrition for gastrointestinal diseases.

6. Methodological guidelines for students on mastering the course

To effectively study the sections of Clinical Medicin, it is necessary to listen to and study the lecture material. To prepare for practical classes, it is recommended to independently study the teaching and methodological materials posted in the MOODLE system and take the assessment on

all proposed topics. During practical classes, actively participate in the discussion of the topic being studied and, if necessary, seek advice from the instructor.

To prepare the abstract, you must select the necessary literature from the university library or other sources, analyze the material, highlight key concepts, and prepare the abstract in accordance with the requirements. To defend the abstract, prepare a short presentation and present it during the practical class.

To successfully pass the midterm assessment in the form of an exam, you must study and master all assessment tools, including interview questions and situational tasks.

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. Moiseev VS, editor. Internal Medicine. Vol. 1. 3rd ed. Moscow: GEOTAR-Media; 2015. 958 p. ISBN 978-5-9704-3309-6.
2. Moiseev VS, editor. Internal Medicine. Vol. 2. 3rd ed. Moscow: GEOTAR-Media; 2015. 895 p. ISBN 978-5-9704-3309-6.
3. Moiseev VS, Martynov AI, Mukhin NA. Internal Medicine. Vol. 1. 3rd ed. Moscow: GEOTAR-Media; 2015. 960 p. Available from: http://www.studmedlib.ru/book/ISBN9785970433102.html
4. Moiseev VS, Martynov AI, Mukhin NA. Internal Medicine. Vol. 2. 3rd ed. Moscow: GEOTAR-Media; 2015. 896 p. Available from: http://www.studmedlib.ru/book/ISBN9785970433119.html
5. Murashko VV, Strutynskiy AV. Electrocardiography. 14th ed. Moscow: MEDpress-Inform; 2017. 360 p. ISBN 978-5-00030-460-0.
6. Murashko VV, Strutynskiy AV. Electrocardiography. 9th ed. Moscow: MEDpress-Inform; 2008. 320 p. ISBN 5-98322-504-9.
7. Murashko VV. Electrocardiography. 12th ed. Moscow: MEDpress-Inform; 2014. 314 p. ISBN 978-5-00030-143-2.
8. Murashko VV, Strutynskiy AV. Electrocardiography. 11th ed. Moscow: MEDpress-Inform; 1991. 320 p.
9. Boon NA, editor. Davidson's Principles and Practice of Medicine: Cardiology and Hematology. Moscow: GEOTAR-Media; 2009. 282 p.
10. Boldueva SA, Arkharov IV, Belyaeva EL, et al. Guide to Faculty Therapy. 2nd ed. Saint Petersburg: North-Western State Medical University Press; 2015. 482 p.
11. Boldueva SA, Arkharov IV, Belyaeva EL, et al. Guide to Faculty Therapy. Saint Petersburg: North-Western State Medical University Press; 2013. 452 p.
12. Boldueva SA, Arkharov IV, Belyaeva EL, et al. Concise Guide to Faculty Therapy. 2nd ed. Saint Petersburg: North-Western State Medical University Press; 2015. 397 p.
13. Boldueva SA, Arkharov IV, Belyaeva EL, et al. Guide to Faculty and Clinical Therapy. Saint Petersburg: North-Western State Medical University Press; 2013. 319 p.
14. Makolkin VI, Sulimov VA, Ovcharenko SI, et al. Internal Medicine: Tests and Case Studies. Moscow: GEOTAR-Media; 2014. 304 p. Available from: http://www.studmedlib.ru/book/ISBN9785970427651.html
15. Roitberg GE, Strutynskiy AV. Internal Medicine: Cardiovascular System. 3rd ed. Moscow: MEDpress-Inform; 2013. 895 p. ISBN 978-5-98322-936-5.

16. Roitberg GE, Strutynskiy AV. Internal Medicine: Laboratory and Diagnostic Methods. 3rd ed. Moscow: MEDpress-Inform; 2013. 799 p. ISBN 978-5-98322-873-3.
17. Roitberg GE, Strutynskiy AV. Internal Medicine: Respiratory System. 3rd ed. Moscow: MEDpress-Inform; 2015. 512 p. ISBN 978-5-00030-163-0.
18. Roitberg GE, Strutynskiy AV. Internal Medicine: Digestive System. 3rd ed. Moscow: MEDpress-Inform; 2014. 558 p. ISBN 978-5-00030-006-0.
19. Martynov AI, Kobalava ZD, Moiseev SV, editors. Internal Medicine. Vol. 1. 4th ed. Moscow: GEOTAR-Media; 2023. 784 p. ISBN 978-5-9704-7231-6. Available at: https://www.studentlibrary.ru/book/ISBN9785970472316.html
20. Martynov AI, Kabalova ZD, Moisee SV, editors. Internal diseases: in 2 volumes. Vol.II. Moscow: GEOTAR-Media, 2023. – 704 p. URL : https://www.studentlibrary.ru/book/ISBN9785970472323.html
21. Olesin AI, Konstantinova IV, Tyuteleva NN. Acquired and Congenital Heart Diseases: Diagnosis and Management Strategies. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2024. 128 p. https://sdo.szgmu.ru/pluginfile.php/921810/mod_resource/content/2/%D0%9E%D0%BB%D0%B5%D1%81%D0%B8%D0%BD_%D0%A1%D0%B5%D1%80%D0%B4%D0%B5%D1%87%D0%BD%D0%B0%D1%8F%20%D0%BD%D0%B5%D0%B4%D0%BE%D1%81%D1%82%D0%B0%D1%82%D0%BE%D1%87%D0%BD%D0%BE%D1%81%D1%82%D1%8C.pdf
22. Olesin AI, Konstantinova IV, Tyuteleva NN. Acquired and Congenital Heart Defects: Diagnosis and Therapeutic Management of Patients. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2024. 128 p. https://sdo.szgmu.ru/pluginfile.php/986029/mod_resource/content/2/%D0%9E%D0%BB%D0%B5%D1%81%D0%B8%D0%BD_%D0%9F%D1%80%D0%B8%D0%BE%D0%B1%D1%80%D0%B5%D1%82%D0%B5%D0%BD%D0%BD%D1%8B%D0%B5%20%D0%B8%20%D0%B2%D1%80%D0%BE%D0%B6%D0%B4%D0%B5%D0%BD%D0%BD%D1%8B%D0%B5%20%D0%BF%D0%BE%D1%80%D0%BE%D0%BA%D0%B8%20%D1%81%D0%B5%D1%80%D0%B4%D1%86%D0%B0.pdf
23. Olesin AI, Konstantinova IV, Zueva YS. Ischemic Heart Disease: Angina Pectoris – Diagnosis and Treatment. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2021. 71 p. Available from: https://sdo.szgmu.ru/pluginfile.php/654168/mod_resource/content/1/%D0%9E%D0%BB%D0%B5%D1%81%D0%B8%D0%BD_%D0%98%D0%91%D0%A1-%D0%A1%D0%A2%D0%95%D0%9D%D0%9E%D0%9A%D0%90%D0%A0%D0%94%D0%98%D0%AF.pdf
24. Olesin AI, Konstantinova IV, Tyuleneva NN. Secondary Arterial Hypertension: Differential Diagnosis and Treatment. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2023. 98 p. Available from: https://sdo.szgmu.ru/pluginfile.php/919177/mod_resource/content/1/%D0%9E%D0%BB%D0%B5%D1%81%D0%B8%D0%BD_%D0%92%D1%82%D0%BE%D1%80%D0%B8%D1%87%D0%BD%D1%8B%D0%B5%20%D0%B0%D1%80%D1%82%D0%B5%D1%80%D0%B8%D0%B0%D0%BB%D1%8C%D0%BD%D1%8B%D0%B5%20%D0%B3%D0%B8%D0%BF%D0%B5%D1%80%D1%82%D0%B5%D0%BD%D0%B7%D0%B8%D0%B8.pdf
25. Olesin AI, Konstantinova IV, Tyuteleva NN. Cardiac Arrhythmias and Conduction Disorders: Diagnosis and Treatment. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2023. 152 p. Available from: https://sdo.szgmu.ru/pluginfile.php/881802/mod_resource/content/1/%D0%9E%D0%BB%D0%B5%D1%81%D0%B8%D0%BD_%D0%9D%D0%B0%D1%80%D1%83%D1%88%D0%B5%D0%BD%D0%B8%D1%8F%20%D1%81%D0%B5%D1%80%D0%B4%D0%B5%D1%87%D0%BD%D0%BE%D0%B3%D0%BE%20%D1%80%D0%B8%D1%82%D0%BC%D0%B0.pdf

26. Olesin AI, Konstantinova IV. Differential Diagnosis of Edema and Ascites. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2021. 104 p. Available from: https://sdo.szgmu.ru/pluginfile.php/654143/mod_resource/content/6/%D0%9E%D0%BB%D0%B5%D1%81%D0%B8%D0%BD%20%D0%90.%D0%98._%D0%94%D0%B8%D1%84%D1%84%D0%B5%D1%80%D0%B5%D0%BD%D1%86%D0%B8%D0%B0%D0%BB%D1%8C%D0%BD%D0%B0%D1%8F%20%D0%B4%D0%B8%D0%B0%D0%B3%D0%BD%D0%BE%D1%81%D1%82%D0%B8%D0%BA%D0%B0%20%D0%BE%D1%82%D0%B5%D0%BA%D0%BE%D0%B2%20%D0%B8%20%D0%B0%D1%81%D1%86%D0%B8%D1%82%D0%B0.pdf
27. Olesin AI, Konstantinova IV, Zueva YS. Acute Coronary Syndrome: Diagnosis and Treatment. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2020. 95 p. Available from: https://sdo.szgmu.ru/pluginfile.php/784895/mod_resource/content/2/%D0%9E%D0%BB%D0%B5%D1%81%D0%B8%D0%BD_%D0%9E%D1%81%D1%82%D1%80%D1%8B%D0%B9%20%D0%BA%D0%BE%D1%80%D0%BE%D0%BD%D0%B0%D1%80%D0%BD%D1%8B%D0%B9%20%D1%81%D0%B8%D0%BD%D0%B4%D1%80%D0%BE%D0%BC.pdf
28. Olesin AI, Novikova TN, Konstantinova IV, et al. Non-Coronary Heart Diseases (Cardiomyopathies, Pericarditis, Myocarditis): Diagnosis and Management. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2024. 180 p. Available from:https://sdo.szgmu.ru/pluginfile.php/986018/mod_resource/content/1/%D0%9E%D0%BB%D0%B5%D1%81%D0%B8%D0%BD_%D0%9D%D0%B5%D0%BA%D0%BE%D1%80%D0%BE%D0%BD%D0%B0%D1%80%D0%BE%D0%B3%D0%B5%D0%BD%D0%BD%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%D1%81%D0%B5%D1%80%D0%B4%D1%86%D0%B0.pdf
29. Olesin AI, Konstantinova IV, Tyuteleva NN. Clinical Variants of Ischemic Heart Disease: Diagnosis and Treatment. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2023. 168 p. Available from: https://sdo.szgmu.ru/pluginfile.php/881742/mod_resource/content/1/%D0%9E%D0%BB%D0%B5%D1%81%D0%B8%D0%BD_%D0%98%D0%91%D0%A1%20%282%29.pdf
30. Olesin AI, Konstantinova IV, Tyuteleva NN. Clinical Variants of Ischemic Heart Disease: Diagnosis and Treatment. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2023. 168 p. Available from: https://sdo.szgmu.ru/pluginfile.php/985200/mod_resource/content/1/
31. Shilov EM, Smirnov AV, Kozlovskaya NL, editors. Nephrology: Clinical Guidelines. Moscow: GEOTAR-Media; 2016. 816 p. Available from: https://mbasegeotar.ru/book/ISBN9785970416419/call_reader.html?SSr=07E9011954AFB
32. Ermolenko VM, Nikolaev AY. Acute Renal Failure. Moscow: GEOTAR-Media; 2017. Available from: https://mbasegeotar.ru/book/ISBN9785970441725/call_reader.html?SSr=07E9011B836FC
33. Barabanova NG. Rheumatology. Part 1. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2023. 116 p. Available from: https://sdo.szgmu.ru/pluginfile.php/823122/mod_resource/content/2/%D0%91%D0%B0%D1%80%D0%B0%D0%B1%D0%B0%D0%BD%D0%BE%D0%B2%D0%B0%20_%D0%A0%D0%B5%D0%B2%D0%BC%D0%B0%D1%82%D0%BE%D0%BB%D0%BE%D0%B3%D0%B8%D1%8F.%D1%87.1_%D1%84%D0%B8%D0%BD%D0%B0%D0%BB.pdf
34. Barabanova NG. Rheumatology. Part 2. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2023. 168 p. Available from: https://sdo.szgmu.ru/pluginfile.php/880849/mod_resource/content/1/%D0%91%D0%B0%D1%80%D0%B0%D0%B1%D0%B0%D0%BD%D0%BE%D0%B2%D0%B0%20_%D0%A0%D0%B5%D0%B2%D0%BC%D0%B0%D1%82%D0%BE%D0%BB%D0%BE%D0%B3%D0%B8%D1%8F_%282%20%D0%A7%29%20_%D0%A4%D0%98%D0%9D%D0%90%D0%9B.pdf

35. Nasonov EL. Russian Clinical Guidelines: Rheumatology. Moscow: GEOTAR-Media; 2017. 464 p. Available from: https://www.studentlibrary.ru/book/ISBN9785970442616.html
36. Usanova AA, editor. Rheumatology. Moscow: GEOTAR-Media; 2023. 408 p. Available from https://www.studentlibrary.ru/book/ISBN9785970474488.html
37. Lezhnev DA, et al. Fundamentals of Diagnostic Imaging. Moscow: GEOTAR-Media; 2022. 128 p. Available from: https://www.studentlibrary.ru/ru/book/ISBN9785970472675.html?SSr=07E9011B6DB61
38. Umarova IA, Gorelov AI, Kucherenko NG. Community-Acquired Pneumonia. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2022. 80 p. Available from: https://sdo.szgmu.ru/pluginfile.php/657119/mod_resource/content/1/%D0%92%D0%BD%D0%B5%D0%B1%D0%BE%D0%BB%D1%8C%D0%BD%D0%B8%D1%87%D0%BD%D0%B0%D1%8F%20%D0%BF%D0%BD%D0%B5%D0%B2%D0%BC%D0%BE%D0%BD%D0%B8%D1%8F%2C%20%D0%90%D0%B2%D1%82%D0%BE%D1%80%D1%8B%20%D0%98.%D0%90.%20%D0%A3%D0%BC%D0%B0%D1%80%D0%BE%D0%B2%D0%B0%2C%20%20%D0%90.%D0%98.%20%D0%93%D0%BE%D1%80%D0%B5%D0%BB%D0%BE%D0%B2%2C%20%D0%9D.%D0%93.%20%D0%9A%D1%83%D1%87%D0%B5%D1%80%D0%B5%D0%BD%D0%BA%D0%BE%20%D0%9D.%D0%93..pdf
39. Umarova IA, Gorelov AI, Kucherenko NG. Community-Acquired Pneumonia. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2022. 80 p. Available from: https://sdo.szgmu.ru/pluginfile.php/754333/mod_resource/content/1/%D0%98.%C2%A0%D0%90.%C2%A0%D0%9B%D0%B5%D0%B1%D0%B5%D0%B4%D0%B5%D0%B2%D0%B0%20%D0%97%D0%90%D0%91%D0%9E%D0%9B%D0%95%D0%92%D0%90%D0%9D%D0%98%D0%AF%20%D0%9F%D0%98%D0%A9%D0%95%D0%92%D0%9E%D0%94%D0%90%20%D0%98%20%D0%96%D0%95%D0%9B%D0%A3%D0%94%D0%9A%D0%90.pdf
40. Lebedeva IA. Differential Diagnosis of Jaundice. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2022. 80 p. Available from: https://sdo.szgmu.ru/pluginfile.php/717170/mod_resource/content/1/%D0%98.%C2%A0%D0%90.%C2%A0%D0%9B%D0%B5%D0%B1%D0%B5%D0%B4%D0%B5%D0%B2%D0%B0%20%D0%94%D0%98%D0%A4%D0%A4%D0%95%D0%A0%D0%95%D0%9D%D0%A6%D0%98%D0%90%D0%9B%D0%AC%D0%9D%D0%90%D0%AF%20%D0%94%D0%98%D0%90%D0%93%D0%9D%D0%9E%D0%A1%D0%A2%D0%98%D0%9A%D0%90%20%D0%96%D0%95%D0%9B%D0%A2%D0%A3%D0%A5.pdf
41. Umarova IA, Gorelov AI, Kucherenko NG, et al. Pulmonology. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2023. 360 p. Available from: https://sdo.szgmu.ru/pluginfile.php/830359/mod_resource/content/1/%D0%A3%D0%BC%D0%B0%D1%80%D0%BE%D0%B2%D0%B0_%D0%9F%D1%83%D0%BB%D1%8C%D0%BC%D0%BE%D0%BD%D0%BE%D0%BB%D0%BE%D0%B3%D0%B8%D1%8F_%D0%A4%D0%98%D0%9D%D0%90%D0%9B.pdf
42. Mikhailov AM, Morozova AM. Hematology. Part 1. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2024. 72 p. Available from: https://sdo.szgmu.ru/pluginfile.php/989368/mod_resource/content/1/%D0%9C%D0%B8%D1%85%D0%B0%D0%B9%D0%BB%D0%BE%D0%B2_%D0%93%D0%B5%D0%BC%D0%B0%D1%82%D0%BE%D0%BB%D0%BE%D0%B3%D0%B8%D1%8F.%20%D0%A7.%20I.pdf
43. Mikhailov AM, Morozova AM. Hematology. Part 2. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2024. 72 p.
44. Mikhailov AM, Morozova AM. Hematology. Part 2. Saint Petersburg: North-Western State Medical University named after I.I. Mechnikov; 2024. 32 p. Available from: https://sdo.szgmu.ru/pluginfile.php/989369/mod_resource/content/1/%D0%9C%D0%B8%D1%85%D0%B0%D0%B9%D0%BB%D0%BE%D0%B2_%D0%93%D0%B5%D0%BC%D0%

B0%D1%82%D0%BE%D0%BB%D0%BE%D0%B3%D0%B8%D1%8F.%20%D0%A7.%20II.pdf
45. Moiseev VS, Martynov AI, Mukhin NA, editors. Internal Medicine. Vol. 1. Moscow: GE-OTAR-Media; 2019. 960 p. Available from: https://www.studentlibrary.ru/book/ISBN9785970453148.html
46. Moiseev VS, Martynov AI, Mukhin NA, editors. Internal Medicine. Vol. 2. Moscow: GE-OTAR-Media; 2019. 896 p. Available from: https://www.studentlibrary.ru/book/ISBN9785970453155.html
47. Makolkin VI, Ovcharenko SI, Sulimov VA. Internal Medicine. 6th ed. Moscow: GEOTAR-Media; 2015. 768 p. Available from: https://www.studentlibrary.ru/book/ISBN9785970433355.html

8.2 Internet sources

Name	Available at
Scientific digital library eLIBRARY.RU	https://elibrary.ru/project_orgs.asp
NEICON: search across scientific journal archives	http://archive.neicon.ru/xmlui/
Platform Springer Link (journals and books from 2005-2017)	https://rd.springer.com/
EastView Medicine and Healthcare in Russia	https://dlib.eastview.com

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
	Cardiology Pulmonology Gastroenterology Nephrology Rheumatology Hematology	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 https://moodle.szgmu.ru/course/view.php?id=75

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-О; State contract № 399/2013-ОА; 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 academic performance monitoring, and midterm assessments, equipped with equipment and technical teaching aids. St. Petersburg, Piskarevsky Prospekt, 47, lit O (Bldg. 19) (offices 20, 21, 37, 38), FSBEI HE I.I. Mechnikov North-Western State Medical University, Ministry of Healthcare of the Russian Federation;

Equipment: chalkboard; teacher's desk, teacher's chair, student desks, student chairs;

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

Special teaching aids: Roger Pen (Roger pen-shaped personal wireless transmitter), Roger MyLink (Roger Pen system signal receiver) (for students with hearing impairments); IntelliKeys (wired keyboard with Russian Braille and a matte black finish), (St. Petersburg, Piskarevsky Prospekt, 47, Building 9, Rooms 18 and 19, I.I. 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 are equipped with the necessary equipment and teaching aids: Rooms 20, 21, 37, and 38, Pavilion 19, Building 0, I.I. Mechnikov North-Western State Medical University, Ministry of Health of the Russian Federation.

Equipment: chalkboard; teacher's desk; two-seater student desk.

Teaching aids: teacher's laptop. Equipment:

- Mannequin (upright torso) for demonstrating physical examination techniques of the respiratory system with the ability to simulate auscultatory images of the heart and lungs;
- Adult mannequin for CPR training, Harvey UM689 cardiopulmonary patient simulator;
- Mannequin for practicing ECG skills (12-lead) 260-20001 ZXD190;
- Mannequin for practicing ECG skills;
- Simulator for physical examination of a cardiac patient;
- Abdominal examination simulator, auscultation simulator set;

Simulator for examining a cardiac patient with synchronized blood pressure readings and vascular pulsation.

Clinical sites, contracts.

– Pokrovskaya City Hospital – (Contract No. 62/2015 – OPP dated April 28, 2015);

– Federal State Healthcare Institution "Clinical Hospital No. 122 named after L.G. Sokolov" of the Federal Medical and Biological Agency (FMBA) – (Agreement No. 83/2015 – OPP dated September 3, 2015);

– City Hospital No. 3. Hospital of the Holy Martyr Elizabeth – (Agreement No. 48/2017 – OPP dated May 5, 2017);

– Federal State Budgetary Institution "St. Petersburg Scientific Center for Epidemiology and Reproduction named after Albrecht of the Federal Medical and Biological Agency of Russia" – (Agreement No. 56/2014 – OPP dated May 27, 2014);

– "Hospital for War Veterans" (Agreement No. 139/2017 OPP dated March 23, 2017)

– City Hospital No. 15 (Agreement No. 105/2018 of the OPP dated May 14, 2018.)

Self-study rooms for students equipped with computers and internet access and access to the University's electronic information and educational environment: St. Petersburg, Piskarevsky Prospekt, 47, lit AE (Building 32), room 1, lit R (Building 9), rooms 18 and 19, Federal State Budgetary Educational Institution of Higher Education I.I. Mechnikov North-Western State Medical University, Ministry of Healthcare 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

Course: Clinical Medicine

Saint Petersburg – 2021

1. List of planned learning outcomes

Code of the competence achievement indicator	Learning outcomes (Assessment criteria)	Assessment methods
Indicator 1 GPC-7.1	**Knows:** the etiology and pathogenesis of diseases of internal medicine; the impact of environmental factors, nutrition, lifestyle, and violations of sanitary and hygienic standards on the development of diseases of internal medicine and their complications; the clinical presentation and features of the course of diseases and their complications in different age groups; complications of diseases requiring emergency hospitalization; principles and methods of conservative treatment and prevention of diseases of internal medicine.	Cases, control questions
	Able to: assess the severity of a patient's condition based on medical history taking, physical examination, and objective clinical findings; interpret the results of laboratory and diagnostic investigations.	
	Has skills in: collecting medical history and interviewing the patient; performing a physical examination; interpreting the results of laboratory and diagnostic investigations; prescribing a therapeutic and protective regimen.	
Indicator 2 GPC-7.2	**Knows:** 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.	Cases, control questions
	Able to: 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.	
	Has skills: of planning and prescribing conservative pharmacological therapy for surgical patients depending on the nosological entity.	
Indicator 3	**Knows:**	Cases, control ques-

GPC-7.3	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.	tions
	Able to: 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.	
	Has skills in: prescribing conservative pharmacological therapy for patients, taking into account potential adverse effects of drug therapy.	
Indicator 4 GPC-7.4	**Knows:** the principles of management of 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 patients, depending on the nosological entity, stage of the disease, clinical course, patient's condition, and the presence of comorbidities.	Cases, control questions
	Able to: assess the condition of a patient; identify complications and determine their severity	
	Has skills in: monitoring the effectiveness and safety of prescribed treatment at all stages of patient management.	
Indicator 1 PC-2.1	**Knows:** the methodology of collecting patient complaints, medical history data, and conducting clinical examination.	Control questions, tests, cases, course work, academic case history
	Able to: analyze data obtained from patient interviews and physical examination in order to recognize the patient's condition or establish the presence or absence of disease; identify the leading clinical syndrome of the disease.	
	Has skills in: performing patient interviews and physical examinations and interpreting the data obtained.	
Indicator 2 PC-2.2	**Knows:** the physiology and pathophysiology of processes underlying the development of major clinical symptoms and syndromes, as well as methods for confirming their presence.	Control questions, tests, cases, course work, academic case history
	Able to: analyze clinical data obtained during patient assessment in the context of underlying pathophysiological mechanisms.	
	Has skills in: formulating a preliminary diagnosis;	

	developing a diagnostic workup plan in accordance with current standards of medical care and clinical guidelines.	
Indicator 3 PC-2.3	**Knows:** the physiology and pathophysiology of processes underlying comorbid conditions.	Control questions, tests, cases, course work, academic case history
	Able to: determine indications for referral to specialist physicians in order to provide specialized inpatient medical care.	
Indicator 4 PC-2.4	**Knows:** the pathophysiology of processes underlying the development of major clinical symptoms and syndromes.	Control questions, tests, cases, course work, academic case history
	Able to: interpret data obtained from patient interviews and physical examination, as well as results of laboratory, diagnostic, and other morphological investigations, in order to establish a diagnosis.	
	Has skills in: performing differential diagnosis of major clinical syndromes.	
Indicator 5 PC-2.5	**Knows:** the physiology and pathophysiology of processes underlying the development of major clinical symptoms and syndromes, as well as methods for confirming their presence; the main approaches to pathogenetic management of these processes through therapeutic interventions in diseases of internal medicine.	Control questions, tests, cases, course work, academic case history
	Able to: analyze all clinical, laboratory, and diagnostic data obtained during patient assessment from a pathophysiological perspective; formulate a clinical diagnosis in accordance with the International Statistical Classification of Diseases and Related Health Problems (ICD).	
	Has skills in: establishing a clinical diagnosis in pathological conditions and common diseases of internal medicine in accordance with the International Statistical Classification of Diseases and Related Health Problems (ICD).	
Indicator 1 PC-3.1	**Knows:** patient management strategies for various diseases of internal medicine; therapeutic treatment programs for diseases of internal medicine; algorithms for selecting pharmacological and non-pharmacological treatment methods based on the diagnosis and individual patient characteristics; indications and contraindications for the use of medicinal products.	Control questions, tests, cases, course work, academic case history
	Able to: assess the patient’s condition and prescribe appropriate treatment;	

	predict the course of the disease; anticipate beneficial and adverse effects of pharmacological therapy in the treatment of diseases of internal medicine.	
	Has skills in: prescribing appropriate treatment in accordance with the established diagnosis; selecting pharmacological and non-pharmacological therapy for patients with the most common diseases of internal medicine.	

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

2.1. Examples of input test

1. What does the term ‘acute coronary syndrome’ mean?
2. Why does coronary artery occlusion suddenly develop during a myocardial infarction?
3. Can a myocardial infarction develop as a result of something other than coronary artery disease?
4. Is there a difference in the composition of the thrombus in ST-segment elevation and non-ST-segment elevation myocardial infarctions?
5. How long does it take for myocardial necrosis to develop during myocardial ischemia?

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 PC-2.1,
Question Title: Question 1
In order to suspect the development of myocardial infarction, the duration of pain syndrome should be no less than: {
~ 60 minutes
= 30 minutes
~ 90 minutes
~ 5 minutes

Indicator 2 PC-2.2
Question Title: Question 2
A third-order pacemaker can generate impulses with a frequency of: {
~ more than 60 per 1 minute
= less than 40 per 1 minute
~ less than 90 per 1 minute
~ all of the above

Indicator 3 PC-2.3
Question Title: Question 3
Clinical manifestations of paroxysmal atrial fibrillation: {
= palpitations
~ Morgagni-Adams-Stokes attack

~ flickering spots before the eyes
~ enlargement of the heart borders to the right

Indicator 4 PC-2.4
Question Title: Question 4
Clinical manifestations of aortic stenosis are characterized by: {
~ there may be no complaints for a long time
~ angina during physical exertion
~ fainting
= all of the above are true

Indicator 5 PC-2.5
Question Title: Question 5
Critical mitral stenosis is defined as a mitral orifice area: {
~ < 2 cm/2.
~ >2 cm/2.
= < 1 cm/2.
~ < 0.1 cm/2.

Indicator 1 PC-3.1
Question Title: Question 6
What antibacterial agents are used for UC treatment? {
= metronidazole, ciprofloxacin
~ kanamycin, amphotericin
~ oxacillin, amoxicillin
~ cephalosporin, gentamicin

Evaluation criteria, test assessment scale

Grade		Description
excellent	5	completed in full – 85%-100%
good	4	not completed in full – 70%-84%
satisfactory	3	completed with deviation – 70%-79%
unsatisfactory	2	Partially completed – 54% or less correct answers

2.3. Sample course work topics

Indicator 1 GPC-7.1 Bronchial obstruction syndrome with development of hypoventilation, tellectasis, emphysema.
Indicator 2 GPC-7.2 Algorithm for differential diagnostic search in pulmonary tissue infiltration syndrome (bacterial pneumonia, lung tumors, tuberculosis).
Indicator 3 GPC-7.3 Management of community-acquired pneumonia in the elderly.
Indicator 4 GPC-7.4 Primary prevention of cardiovascular diseases in adults.
Indicator 1 PC-2.1 Treatment of cardiovascular diseases (hypertension, heart defects in pregnant women).
Indicator 2 PC-2.2 Risk factors and prevention of pulmonary embolism.
Indicator 3 PC-2.3 Metabolic syndrome. Features of antihypertensive therapy.
Indicator 2 PC-2.4 Modern diagnostic methods in cardiac patients.
Indicator 5 PC-2.5 Hyperlipidemia: Diagnosis, Treatment, and Prevention.
Indicator 1 PC-3.1 Anticoagulants in Therapeutic Practice.

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 rel-

Grade		Description
		evance 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 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	0	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. Sample questions for oral interview

Indicator 1 PC-2.1.

Congenital heart defects in adults. Classification and prevalence. Clinical manifestations of atrial septal defect, ventricular septal defect, patent ductus arteriosus, and Ebstein's anomaly. Diagnostic criteria for congenital defects. Management of patients with congenital heart defects.

Indicator 2 PC-2.2.

Symptomatic arterial hypertension (AH). Definition of hypertension. Classification of symptomatic AH. Etiology and mechanisms of pathogenesis.

Indicator 3 PC-2.3.

Clinical presentation, electrocardiographic diagnostics. Differential diagnosis of supraventricular tachycardia. Treatment tactics.

Indicator 4 PC-2.4.

Atrioventricular blocks – definition, etiology, classification, diagnostic criteria, and treatment tactics.

Indicator 5 PC-2.5.

Aplastic anemias and partial aplasias – definition, etiology, and pathogenesis. Diagnostic criteria. Clinical presentation of aplastic anemia. Treatment of patients with aplastic anemia.

Indicator 1 PC-3.1.

Principles of treatment for Hodgkin's lymphoma and other lymphomas

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.

2.5. Sample cases

Indicator 1 OPC-7.1.

Case №

Patient Z., 58, has suffered from severe COPD for approximately 10 years. He presented with complaints of shortness of breath at rest and paroxysmal cough with purulent sputum production in the morning, up to 100 ml per day.

Objectively: the patient is in a moderate condition. Diffuse cyanosis is present. Edema is present in the lower extremities, reaching the middle of the lower third of the leg. The pulse is 100 beats per minute, rhythmic. The heart rate is 100 beats per minute. Heart sounds are muffled, the first heart sound is unchanged, the second heart sound is accentuated over the pulmonary artery, and is clear. Respiratory rate is 24 beats per minute. Percussion reveals a hyperbaric sound over all lung fields. On auscultation, breath sounds are harsh, carried throughout, and somewhat weakened in the lower parts of both lungs, with the presence of moist, sonorous, large-bubble rales. The abdomen is enlarged due to subcutaneous fat. It is soft and painless on palpation. The liver protrudes 4 cm beyond the costal margin. The spleen is not palpable. AP chest X-rays show deformed pulmonary patterns in the lower lobes on both sides. CT scans of the lungs show signs of pulmonary emphysema, diffuse pneumosclerosis, and saccular and fusiform bronchiectasis in the lower lobes of both lungs.

1. Establish a diagnosis.
2. What examinations are needed to establish a diagnosis?
3. What diseases should be considered in the differential diagnosis?
4. Assess the possibility of surgical treatment.
5. Outpatient management strategy.

Indicator 2 OPC-7.2.

Case №1

A 29-year-old patient was admitted to the internal medicine department complaining of severe epigastric pain occurring 2-3 hours after eating, at night, radiating to the lumbar region and resolving after taking Almagel. He also experienced heartburn, sour belching, nausea, and vomiting, after which the pain subsided. He had been ill for 9 years; during his military service, he was treated in the hospital for chronic gastroduodenitis. He has noted annual exacerbations of the disease over the past 3 years and usually takes Almagel on his own. He was hospitalized due to deteriorating health. He has no family history of the disease. He smokes a pack of cigarettes a day, and his work requires business travel.

Objectively: his condition is satisfactory. The tongue is moist, coated with a white-yellow coating. The abdomen is soft, distended, and painful in the epigastrium 2-3 cm to the right of the xiphoid process. The liver does not protrude beyond the costal margin. Other internal organs are normal.

1. Establish a preliminary diagnosis.
2. Develop a patient examination plan.
3. Prescribe a treatment regimen.
4. What diseases should be considered in the differential diagnosis?

5. Follow-up care at the outpatient stage.

Indicator 3 OPC-7.3.

Case №2

Patient L., 43, was admitted to the intensive care unit complaining of shortness of breath. Communication with the patient is difficult due to severe expiratory dyspnea, but relatives have established that the patient has a long-standing (approximately 20 years) history of moderate allergic bronchial asthma, for which he is being monitored by a pulmonologist at the outpatient clinic. Exacerbations typically occur in late spring and early summer, during the flowering season.

In recent years, during exacerbations, he has typically taken inhaled beclomethasone 250 mcg twice daily, formoterol 12 mcg twice daily, and salbutamol 100 mcg as needed. This exacerbation occurred at his dacha: for a week, he suffered from asthma attacks (initially 1-2 per day), which were relieved by inhaled salbutamol. In addition to salbutamol, he used formoterol (he didn't have any beclomethasone with him). However, the frequency of attacks gradually increased. On the day of hospitalization, he used approximately 15 single doses of salbutamol, but his condition progressively worsened: another asthma attack was not relieved, shortness of breath began to increase, and acrocyanosis developed. Emergency medical assistance was called and the patient was hospitalized.

Objectively: the patient's position is forced (sitting, leaning forward, supporting himself on his arms), the skin is moist, the face is cyanotic, distant wheezing is audible, and the respiratory rate is approximately 40 breaths per minute. Auscultation reveals numerous dry rales, and breath sounds are not audible over certain areas of the lungs. A complete blood count reveals high eosinophilia; acid-base analysis reveals hypoxemia, hypercapnia, and respiratory acidosis. Peak expiratory flow rate is 18% of the predicted value.

1. Formulate a diagnosis.
2. Describe the patient's condition.
3. What diseases should be considered in the differential diagnosis?
4. List the necessary emergency care measures:
5. What will be your further management strategy for the patient?

Indicator 4 OPC-7.4.

Case №3

Patient I., 72, was admitted to the hospital complaining of nausea, epigastric pain, and intermittent black stool. She has a history of coronary heart disease and knee osteoarthritis, for which she has been taking metoprolol 75 mg twice daily for the past 2 years; simvastatin 10 mg at night; nitrates as needed; acetylsalicylic acid 100 mg daily; and diclofenac 50 mg 3 times daily. FGDS reveals multiple hemosiderin-covered erosions in the gastric mucosa, and a negative urea breath test. Hemoglobin is 85 g/L, and serum iron is 7 mmol/L.

1. Determine the cause of gastropathy in this patient.
2. What medications should be prescribed for treatment?
3. Determine the treatment strategy for osteoarthritis in this patient.
4. What complications should we be wary of in this patient?
5. Patient care during the outpatient phase after discharge

Indicator 1 PC-2.1.

Case №4

Patient K., 48, has suffered from COPD for 12 years. He presented to the clinic complaining of a cough with sputum production and shortness of breath with even the slightest physical exertion (household), which were relieved by Berodual. His symptoms worsened 5 days later after hypothermia.

Objectively: the patient is in moderate condition. The skin is cyanotic. There is no edema. The pulse is 88 beats per minute, rhythmic. Heart sounds are muffled, the first heart sound is unchanged, the second heart sound is accentuated over the pulmonary artery, and is clear. Respiratory rate is 20 beats per minute. The chest is expanded in diameter. The supraclavicular fossae are smoothed out.

Percussion reveals a hyperbaric sound over all lung fields. On auscultation, breath sounds are harsh, distributed throughout the lungs, and there are numerous dry, scattered wheezing sounds. Epigastric pulsation is visible. The liver is not palpable. Liver size is 11 x 8 x 7 cm according to Kurlov. Spirometry results after a bronchodilator test show a Genslar index (0.52) of 52%. FEV1 is 40% predicted.

1. Make a diagnosis.
2. What is the physician's approach in outpatient practice?
3. What diseases should be considered for differential diagnosis?
4. Prescribe the necessary tests.
5. Treatment plan.

Indicator 2 PC-2.2.

Case №5

A 29-year-old patient was admitted to the internal medicine department complaining of severe epigastric pain occurring 2-3 hours after eating, at night, radiating to the lumbar region and resolving after taking Almagel. He also experienced heartburn, sour belching, nausea, and vomiting, after which the pain subsided. He had been ill for 9 years; during his military service, he was treated in the hospital for chronic gastroduodenitis. He has noted annual exacerbations of the disease over the past 3 years and usually takes Almagel on his own. He was hospitalized due to deteriorating health. He has no family history of the disease. He smokes a pack of cigarettes a day, and his work requires business travel.

Objectively: his condition is satisfactory. The tongue is moist, coated with a white-yellow coating. The abdomen is soft, distended, and painful in the epigastrium 2-3 cm to the right of the xiphoid process. The liver does not protrude beyond the costal margin. Other internal organs are normal.

1. Establish a preliminary diagnosis.
2. Develop a patient examination plan.
3. Prescribe a treatment regimen.
4. What diseases should be considered in the differential diagnosis?
5. Follow-up care at the outpatient stage.

Indicator 3 PC-2.3.

Case №6

A 37-year-old female patient complains of a fever of 38.6°C, nagging pain in the right lumbar region, and painful, frequent urination. These complaints began two days ago after exposure to cold. She took antipyretics without significant benefit. Concomitant pathology includes chronic sinusitis outside of an exacerbation. On examination, the skin is pale and hot to the touch, body temperature is 38.3°C, pulse is 78 beats per minute, rhythmic, and satisfactory, blood pressure is 110/70 mmHg, heart sounds are loud, no murmurs, vesicular breathing in the lungs, and no wheezing. The abdomen is slightly distended, soft, and painless. Muscle tension is present in the lumbar region, and percussion is positive on the right side.

Based on the examination results: Clinical blood test: Leukocytes - $11{,}8\times10^{9}$/l, p/y - 13%, Erythrocytes 4.2×10^{12}/l, hemoglobin 130 g/l, Platelets - 280×10^{9}/l, ESR - 18 mm/h. Biochemical blood test: total protein - 71 g/l, glucose 5.7 mmol/l, AST 15 U/l, ALT 16 U/l, total bilirubin 10 μmol/l, K+ 4.1 mmol/l, Na+ 135 mmol/l, cholesterol - 4.0 mmol/l, creatinine 90 μmol/l, urea 5.2 mmol/l.

Urinalysis: yellow, cloudy, protein - no, sugar - no, leukocytes - half the field of view, epithelium 30-40 per field of view, bacteria +++. Kidney ultrasound: enlarged right kidney, interstitial edema, dilated renal pelvis on the right, normal on the left.

1. Formulate a diagnosis.
2. Suggest additional diagnostic tests to clarify the diagnosis.
3. Which specialists should be involved in the patient's examination?
4. Prescribe treatment.
5. Prognosis.

Indicator 4 PC-2.4.

Case №7

A 56-year-old man with hypertension, 6 days after developing an acute myocardial infarction in the anterolateral wall, complains of sudden onset of shortness of breath and a cough with frothy sputum.

Objectively: the patient's condition is serious. The patient is conscious, agitated, and sitting. The lips are cyanotic. Blood pressure is 180/120 mmHg, pulse is 100 bpm, and regular. Heart sounds are muffled, with a gallop rhythm and a pronounced second heart sound over the pulmonary artery. Moist rales of varying caliber are present in the lungs, reaching the level of the angle of the scapula. The abdomen is soft and painless. There is no peripheral edema.

1. Establish a preliminary diagnosis.
2. Perform a differential diagnosis.
3. Determine further diagnostic strategies.
4. Determine treatment strategies.
5. What other complications may develop at this stage of the disease?

Indicator 5 PC-2.5.

Case №8

A 43-year-old man smokes, drinks alcohol regularly, and works as an on-call electrician, therefore undergoing an annual medical examination. He considered himself healthy in the past. A month ago, he suffered from an acute respiratory viral infection but did not seek medical attention, continuing to work. He complains of shortness of breath during exertion, fever, severe weakness, palpitations, dry mouth, and thirst. Edema has developed in his legs in the evenings.

Objectively: his condition is moderate, he is pale, has mild yellowing of the skin, distended jugular veins, and has edema of the lower extremities at the level of the lower third of the shins. His pulse is regular at 108 beats per minute, blood pressure is 95/70 mmHg, and his respirations are 24 per minute. Percussion reveals enlarged cardiac borders in all directions, the apex beat, as well as the heartbeat, are not detectable, heart sounds are significantly weakened, and no murmurs are audible. Percussion and auscultation of the lungs are unremarkable. The abdomen is soft, the liver is enlarged and firm, protruding 4 cm from under the costal margin, its edge is sharp and slightly tender. The spleen is not enlarged. Urination is painless.

Blood analysis reveals relative lymphocytosis and an increase in ESR to 32 mm/hour in the absence of anemia and a normal white blood cell count. Urinalysis reveals slight proteinuria (up to 0.033-0.066 g/L). ECG reveals sinus tachycardia, a sharp decrease in voltage, and impaired repolarization manifested by ST segment elevation in all leads. There is no evidence of left or right heart hypertrophy or intraventricular conduction disturbances. Chest X-ray reveals lung fields without infiltrative or diffuse changes, and the pulmonary pattern is weakened. The cardiac shadow is enlarged on both sides. The arcs of the cardiac shadow are smoothed out and lie broadly on the diaphragm.

1. Formulate a preliminary diagnosis.
2. What additional examination methods do you suggest?
3. Further medical management.
4. Treatment.
5. Prognosis.

Indicator 1 PC-3.1.

Case №9

Patient I., 72, was admitted to the hospital complaining of nausea, epigastric pain, and intermittent black stool. She has a history of coronary heart disease and knee osteoarthritis, for which she has been taking metoprolol 75 mg twice daily for the past 2 years; simvastatin 10 mg at night; nitrates as needed; acetylsalicylic acid 100 mg daily; and diclofenac 50 mg 3 times daily. FGDS reveals multiple hemosiderin-covered erosions in the gastric mucosa, and a negative urea breath test. Hemoglobin is 85 g/L, and serum iron is 7 mmol/L.

1. Determine the cause of gastropathy in this patient.
2. What medications should be prescribed for treatment?
3. Determine the treatment strategy for osteoarthritis in this patient.

4. What complications should we be wary of in this patient?
5. Patient care during the outpatient phase after discharge

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.

2.6. Scheme for writing Academic case history

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, Indicator 1 PC-3.1

Title Page (separate page)

1. Patient Identification Data
2. Chief Complaints: primary complaints and those identified during a systems-based interview
3. History of the Present Illness and Comorbid Conditions
4. Past Medical and Social History
5. Findings of the Physical Examination
6. Justification and Formulation of the Preliminary Diagnosis
7. Diagnostic Workup Plan
8. Results of Laboratory and Diagnostic Investigations; Consultants' Conclusions
9. Final Clinical Diagnosis (justification and formulation)
10. Differential Diagnosis
11. Etiology and Pathogenesis (academic case history only)
12. Pathological and Anatomical Changes in Organs (academic case history only)
13. Treatment of the Underlying Disease (academic case history only)
14. Patient Management and Its Rationale
15. Prognosis
16. Prevention (Primary and Secondary)
17. Discharge Summary (Epicrisis)
18. Supervision Log (Daily Progress Notes)
19. References

Evaluation criteria, academic case history grading scale

Grade		**Description**
Excellent	5	All requirements for the preparation and defense of the Case History have been fully met.
Good	4	The main requirements for the Case History and its defense have been met; however, certain shortcomings are present, including minor inaccuracies in content presentation, lack of logical consistency in reasoning, failure to comply with the required length, formatting deficiencies, and incomplete answers to additional questions during the defense.
Satisfactory	3	Significant deviations from the requirements for the Case History are identified, including partial coverage of the topic and incorrect formulation of the diagnosis. Answers to additional questions during the defense are incomplete.
Unsatisfactory	2	A substantial lack of understanding of the clinical problem has been demonstrated, or the Case History has not been submitted.

3. Ongoing assessment

Ongoing assessment includes checking course work, checking academic case history, oral interview, testing, solving cases.

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

4.1. Sample list of control questions for exam:

Indicator 1 GPC-7.1

Aortic heart defects: etiology, pathogenesis, clinical presentation, diagnosis, severity classification, differential diagnosis, treatment.

Indicator 2 GPC-7.2

Congenital heart defects in adults. Classification and prevalence. Clinical manifestations of atrial septal defect, ventricular septal defect, patent ductus arteriosus, and Ebstein's anomaly. Diagnostic criteria for congenital defects. Management of patients with congenital heart defects.

Indicator 3 GPC-7.3

Cardiomyopathies - definition, etiopathogenesis. Classification of cardiomyopathies.

Indicator 4 GPC-7.4

Clinical presentation of hypertrophic cardiomyopathy, causes of development. Instrumental diagnostics.

Indicator 1 GPC-7.1

Clinical presentation of dilated cardiomyopathy, causes of development. Instrumental Diagnostics

Indicator 2 GPC-7.2

Clinical Presentation of Restrictive Cardiomyopathy, Causes of Development. Instrumental Diagnostics

Indicator 3 GPC-7.3

Pericarditis - Definition, Etiology, and Pathogenesis of Pericarditis. Classification. Clinical Presentation of Dry, Effluent, and Constrictive Pericarditis

Indicator 4 GPC-7.4

Diagnostic Criteria, Treatment, Prevention, and Prognosis of Pericarditis.

Indicator 5 GPC-7.5

Diagnosis and Treatment Tactics for Cardiac Tamponade and Constrictive Pericarditis

Indicator 1 PC-3.1

Symptomatic Arterial Hypertension (AH). Definition of AH. Classification of Symptomatic AH. Etiology and Pathogenesis Mechanisms

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

Case №.1

A 78-year-old man began to notice frequent colds and had four bouts of acute pneumonia in the past year. Over the past three months, he has developed pain in the bones of the chest, thoracic, and lumbar spine. Upon consultation with the doctor, his blood test results showed Hb 110 g/L, Er 3.2×10^{12}/L, L 3.6×10^{9}/L, unchanged white blood cell count, and erythrocyte sedimentation rate of 72 mm/hour.

1. Preliminary diagnosis.
2. Outpatient examination plan.
3. What other conditions should be considered for differential diagnosis?
4. Further treatment plan.
5. Prognosis.

Indicator 2 GPC-7.2

Case № 2

A 47-year-old patient with a long history of smoking, arterial hypertension, and overweight was urgently admitted to the intensive care unit complaining of intense, crushing pain in the left chest, radiating to the left arm and lower jaw.

Objectively: the patient's condition is severe. The skin is pale and moist. The pulse is 45 beats per minute, regular. Blood pressure is 110/70 mmHg. Heart sounds are muffled and regular. The breathing sounds are harsh, with isolated moist rales in the lower lungs. The abdomen is soft and painless. The liver is not enlarged. There is no swelling of the lower extremities. ECG: sinus rhythm, heart rate 40 beats per minute. Second-degree atrioventricular block, type 2. ST segment elevation in leads III, aVF, ST segment depression in leads I, II, and V1-V4.

1. Interpret the electrocardiogram and formulate a preliminary diagnosis.

2. Develop a patient examination plan.
3. Determine further medical management and prescribe a treatment regimen.
4. Possible complications of this disease.
5. Prognosis.

Indicator 3 GPC-7.3

Case № 3 Patient Z., 58, has suffered from severe COPD for approximately 10 years. He presented with complaints of shortness of breath at rest and paroxysmal cough with purulent sputum production in the morning, up to 100 ml per day.

Objectively: the patient is in a moderate condition. Diffuse cyanosis is present. Edema is present in the lower extremities, reaching the middle of the lower third of the leg. The pulse is 100 beats per minute, rhythmic. The heart rate is 100 beats per minute. Heart sounds are muffled, the first heart sound is unchanged, the second heart sound is accentuated over the pulmonary artery, and is clear. Respiratory rate is 24 beats per minute. Percussion reveals a hyperbaric sound over all lung fields. On auscultation, breath sounds are harsh, carried throughout, and somewhat weakened in the lower parts of both lungs, with the presence of moist, sonorous, large-bubble rales. The abdomen is enlarged due to subcutaneous fat. It is soft and painless on palpation. The liver protrudes 4 cm beyond the costal margin. The spleen is not palpable. AP chest X-rays show deformed pulmonary patterns in the lower chest on both sides.

1. Formulate a preliminary diagnosis.
2. What examination methods should be prescribed to establish the diagnosis?
3. What diseases should be considered in the differential diagnosis?
4. Assess the possibility of surgical treatment.
5. Outpatient management strategy.

Indicator 4 GPC-7.4.

Case №4

Patient I., 72, was admitted to the hospital complaining of nausea, epigastric pain, and intermittent black stool. She has a history of coronary heart disease and knee osteoarthritis, for which she has been taking metoprolol 75 mg twice daily for the past 2 years; simvastatin 10 mg at night; nitrates as needed; acetylsalicylic acid 100 mg daily; and diclofenac 50 mg 3 times daily. FGDS revealed multiple hemosiderin-covered erosions in the gastric mucosa, and a negative urea breath test. Hemoglobin is 85 g/L, and serum iron is 7 mmol/L.

1. Determine the cause of gastropathy in this patient.
2. What medications should be prescribed for treatment?
3. Determine the treatment strategy for osteoarthritis in this patient.
4. What complications should we be wary of in this patient?
5. Patient care during the outpatient phase after discharge

Indicator 1 PC-2.1.

Case №5

Patient K., 48, has suffered from COPD for 12 years. He presented to the clinic complaining of a cough with sputum production and shortness of breath with even the slightest physical exertion (household), which were relieved by Berodual. The condition worsened 5 days later after hypothermia.

Objectively: the patient's condition is moderate. The skin is cyanotic. There is no edema. The pulse is 88 beats per minute, rhythmic. Heart sounds are muffled, the first heart sound is unchanged, the second heart sound is accentuated over the pulmonary artery, and is clear. Respiratory rate is 20 beats per minute. The chest is expanded in diameter. The supraclavicular fossae are smoothed out.

Percussion reveals a hyperbaric sound over all lung fields. On auscultation, breath sounds are harsh, distributed throughout the lungs, and there are numerous dry, scattered wheezing sounds. Epigastric pulsation is visible. The liver is not palpable. Liver size is 11 x 8 x 7 cm according to Kurlov. Spirometry results after a bronchodilator test show a Genslar index (0.52) of 52%. FEV1 is 40% predicted.

1. Establish a diagnosis.
2. What is the physician's approach in outpatient practice?
3. What diseases should be considered for differential diagnosis?
4. Prescribe the necessary tests.
5. Treatment plan.

Indicator 2 PC-2.2.

Case №6

A 29-year-old patient was admitted to the internal medicine department complaining of severe epigastric pain occurring 2-3 hours after eating, at night, radiating to the lumbar region and resolving after taking Almagel. He also experienced heartburn, sour belching, nausea, and vomiting, after which the pain subsided. He had been ill for 9 years; during his military service, he was treated in the hospital for chronic gastroduodenitis. He has noted annual exacerbations of the disease over the past 3 years and usually takes Almagel on his own. He was hospitalized due to deteriorating health. He has no family history of the disease. He smokes a pack of cigarettes a day, and his work requires business travel.

Objectively: his condition is satisfactory. The tongue is moist, coated with a white-yellow coating. The abdomen is soft, distended, and painful in the epigastrium 2-3 cm to the right of the xiphoid process. The liver does not protrude beyond the costal margin. Other internal organs are normal.

1. Establish a preliminary diagnosis.
2. Develop a patient examination plan.
3. Prescribe a treatment regimen.
4. What diseases should be considered in the differential diagnosis?
5. Follow-up care at the outpatient stage.

Indicator 3 PC-2.3.

Case №7

A 37-year-old female patient complains of a fever of 38.6°C, nagging pain in the right lumbar region, and painful, frequent urination. These complaints began two days ago after exposure to cold. She took antipyretics without significant benefit. Concomitant pathology includes chronic sinusitis outside of an exacerbation. On examination, the skin is pale and hot to the touch, body temperature is 38.3°C, pulse is 78 beats per minute, rhythmic, and satisfactory, blood pressure is 110/70 mmHg, heart sounds are loud, no murmurs, vesicular breathing in the lungs, and no wheezing. The abdomen is slightly distended, soft, and painless. Muscle tension is present in the lumbar region, and percussion is positive on the right side.

Based on the examination results: Clinical blood test: Leukocytes - $11{,}8\times10^{9}$/l, p/y - 13%, Erythrocytes 4.2×10^{12}/l, hemoglobin 130 g/l, Platelets - 280×10^{9}/l, ESR - 18 mm/h. Biochemical blood test: total protein - 71 g/l, glucose 5.7 mmol/l, AST 15 U/l, ALT 16 U/l, total bilirubin 10 μmol/l, K+ 4.1 mmol/l, Na+ 135 mmol/l, cholesterol - 4.0 mmol/l, creatinine 90 μmol/l, urea 5.2 mmol/l.

Urinalysis: yellow, cloudy, protein - no, sugar - no, leukocytes - half the field of view, epithelium 30-40 per field of view, bacteria +++. Kidney ultrasound: enlarged right kidney, interstitial edema, dilated renal pelvis on the right, normal on the left.

1. Formulate a diagnosis.
2. Suggest additional diagnostic tests to clarify the diagnosis.
3. Which specialists should be involved in the patient's examination?
4. Prescribe treatment.
5. Prognosis.

Indicator 4 PC-2.4.

Case №8

A 56-year-old man with hypertension, 6 days after developing an acute myocardial infarction in the anterolateral wall, complains of sudden onset of shortness of breath and a cough with frothy sputum.

Objectively: the patient's condition is serious. The patient is conscious, agitated, and sitting. The lips are cyanotic. Blood pressure is 180/120 mmHg, pulse is 100 bpm, and regular. Heart sounds are muf-

fled, with a gallop rhythm and a pronounced second heart sound over the pulmonary artery. Moist rales of varying caliber are present in the lungs, reaching the level of the angle of the scapula. The abdomen is soft and painless. There is no peripheral edema.

1. Establish a preliminary diagnosis.
2. Perform a differential diagnosis.
3. Determine further diagnostic strategies.
4. Determine treatment strategies.
5. What other complications may develop at this stage of the disease?

Indicator 5 PC-2.5.

Case №9

A 43-year-old man smokes, drinks alcohol regularly, and works as an on-call electrician, therefore undergoing an annual medical examination. He considered himself healthy in the past. A month ago, he suffered from an acute respiratory viral infection but did not seek medical attention, continuing to work. He complains of shortness of breath during exertion, fever, severe weakness, palpitations, dry mouth, and thirst. Edema has developed in his legs in the evenings.

Objectively: his condition is moderate, he is pale, has mild yellowing of the skin, distended jugular veins, and has edema of the lower extremities at the level of the lower third of the shins. His pulse is regular at 108 beats per minute, blood pressure is 95/70 mmHg, and his respirations are 24 per minute. Percussion reveals enlarged cardiac borders in all directions, the apex beat, as well as the heartbeat, are not detectable, heart sounds are significantly weakened, and no murmurs are audible. Percussion and auscultation of the lungs are unremarkable. The abdomen is soft, the liver is enlarged and firm, protruding 4 cm from under the costal margin, its edge is sharp and slightly tender. The spleen is not enlarged. Urination is painless.

Blood analysis reveals relative lymphocytosis and an increase in ESR to 32 mm/hour in the absence of anemia and a normal white blood cell count. Urinalysis reveals slight proteinuria (up to 0.033-0.066 g/L). ECG reveals sinus tachycardia, a sharp decrease in voltage, and impaired repolarization manifested by ST segment elevation in all leads. There is no evidence of left or right heart hypertrophy or intraventricular conduction disturbances. Chest X-ray reveals lung fields without infiltrative or diffuse changes, and the pulmonary pattern is weakened. The cardiac shadow is enlarged on both sides. The arcs of the cardiac shadow are smoothed out and lie broadly on the diaphragm.

1. Formulate a preliminary diagnosis.
2. What additional examination methods do you suggest?
3. Further medical management.
4. Treatment.
5. Prognosis.

Indicator 1 PC-3.1.

Case №9

Patient I., 72, was admitted to the hospital complaining of nausea, epigastric pain, and intermittent black stool. She has a history of coronary heart disease and knee osteoarthritis, for which she has been taking metoprolol 75 mg twice daily for the past 2 years; simvastatin 10 mg at night; nitrates as needed; acetylsalicylic acid 100 mg daily; and diclofenac 50 mg 3 times daily. FGDS reveals multiple hemosiderin-covered erosions in the gastric mucosa, and a negative urea breath test. Hemoglobin is 85 g/L, and serum iron is 7 mmol/L.

1. Determine the cause of gastropathy in this patient.
2. What medications should be prescribed for treatment?
3. Determine the treatment strategy for osteoarthritis in this patient.
4. What complications should we be wary of in this patient?
5. Patient care during the outpatient phase after discharge

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 ma-

Grade		Description
		terial. 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.