

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

**Federal State Autonomous Educational Institution of Higher Education
«National Research Lobachevsky State University of Nizhny Novgorod»**

Институт клинической медицины

УТВЕРЖДЕНО

решением Ученого совета ННГУ

протокол № 10 от 02.12.2024 г.

Working programme of the discipline

Propaedeutics of internal diseases

Higher education level

Specialist degree

Area of study / speciality

31.05.01 - General Medicine

Focus /specialization of the study programme

General Medicine

Mode of study

full-time

Nizhny Novgorod

Year of commencement of studies 2025

1. Место дисциплины в структуре ОПОП

Дисциплина Б1.О.31 Пропедевтика внутренних болезней относится к обязательной части образовательной программы.

2. Планируемые результаты обучения по дисциплине, соотнесенные с планируемыми результатами освоения образовательной программы (компетенциями и индикаторами достижения компетенций)

Формируемые компетенции (код, содержание компетенции)	Планируемые результаты обучения по дисциплине (модулю), в соответствии с индикатором достижения компетенции		Наименование оценочного средства	
	Индикатор достижения компетенции (код, содержание индикатора)	Результаты обучения по дисциплине	Для текущего контроля успеваемости	Для промежуточной аттестации
ОПК-1: Способен реализовывать моральные и правовые нормы, этические и деонтологические принципы в профессиональной деятельности	ОПК-1.1: Знает правила врачебной этики, права и обязанности пациента и медицинских работников ОПК-1.2: Умеет применять законы и нормативные акты, регламентирующие работу в профессиональной сфере ОПК-1.3: Владеет нормами этики и деонтологии в общении с населением и коллективом и соблюдает моральные и правовые нормы в профессиональной деятельности	ОПК-1.1: Know the rules of medical ethics, the rights and obligations of patients and healthcare professionals ОПК-1.2: Apply relevant laws and regulations in the professional sphere ОПК-1.3: Maintains ethical, deontological, and legal standards in professional communication and conduct	Опрос	Зачёт: Контрольные вопросы Экзамен: Контрольные вопросы Задачи
ОПК-5: Способен оценивать морфофункциональные, физиологические состояния и патологические процессы в организме человека для решения профессиональных задач	ОПК-5.1: Готов применить алгоритм клинко-лабораторной, инструментальной и функциональной диагностики при решении профессиональных задач ОПК-5.2: Оценивает морфофункциональные, физиологические состояния и патологические процессы в организме человека для интерпретации результатов клинко-лабораторной, инструментальной и функциональной диагностики при решении	ОПК-5.1: Able to apply clinical, laboratory, instrumental, and functional diagnostic algorithms to solve professional tasks ОПК-5.2: Evaluate morphofunctional and physiological conditions, as well as pathological processes in the human body, to interpret clinical, laboratory, instrumental, and functional diagnostic results for professional decision-making ОПК-5.3:	Опрос	Зачёт: Контрольные вопросы Экзамен: Контрольные вопросы Задачи

	профессиональных задач ОПК-5.3: Знает принципы функционирования систем органов.	Know the principles of organ systems functioning.		
ПК-3: Готовность к сбору и анализу жалоб пациента, данных его анамнеза, результатов осмотра, лабораторных, инструментальных, патолого-анатомических и иных исследований в целях распознавания состояния или установления факта наличия или отсутствия заболевания, проведение дифференциальной диагностики	ПК-3.1: Знать методы сбора анамнеза, жалоб, осмотра больного с терапевтической патологией для распознавания заболеваний, этиологию, патогенез, и клинику наиболее часто встречающихся заболеваний внутренних органов; современную классификацию, принципы и особенности основных методов клинических, лабораторных и инструментальных методов обследования, их диагностическое значение ПК-3.2: Уметь получить информацию о заболевании, интерпретировать жалобы, анамнез заболевания и жизни, данные, применить объективные методы обследования, выявить общие и специфические признаки заболевания; построить план обследования больного с учетом стандартов и интерпретировать дополнительные методы обследования (лабораторно-инструментальные) с учетом нормы ПК-3.3: Владеть методами сбора анамнеза, жалоб больного с терапевтической патологией; навыком составления плана дополнительного обследования больного; интерпретацией результатов лабораторных и инструментальных исследований и проведения дифференциальной диагностики	ПК-3.1: Know methods for collecting medical history, patient complaints, and performing physical examinations in therapeutic pathology; recognize diseases, etiology, pathogenesis, and clinical presentation of most common internal medicine conditions; understand modern classifications, principles and specifics of clinical, laboratory, and instrumental diagnostic methods with their diagnostic significance. ПК-3.2: Able to obtain patient medical information, interpret complaints, disease and life history data; apply objective examination methods; identify general and specific disease symptoms; develop patient examination plans according to standards; and interpret additional diagnostic tests (laboratory and instrumental) with reference to normal values ПК-3.3: Possesses skills in: collecting medical history and complaints in therapeutic pathology; developing plans for additional patient examinations; interpreting laboratory and instrumental test results; and performing differential diagnosis.	Опрос	Зачёт: Контрольные вопросы Экзамен: Контрольные вопросы Задачи
ПК-4: Готовность к определению у	ПК-4.1: Знать этиологию, патогенез заболеваний	ПК-4.1: Knows the etiology and	Опрос	Зачёт:

пациента основных патологических состояний, симптомов, синдромов заболеваний, нозологических форм в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем, X пересмотра	соответственно с Международной статистической классификацией болезней и проблем, связанных со здоровьем X пересмотра ПК-4.2: Уметь определить основные симптомы, синдромы нозологических форм заболеваний в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем X пересмотра ПК-4.3: Владеть навыками постановки диагноза на основании симптомов, синдромов нозологических форм заболеваний в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем X пересмотра	pathogenesis of disease nosologies in accordance with ICD-10 (International Classification of Diseases, 10th Revision). ПК-4.2: Can identify principal symptoms and syndromes of disease nosologies in accordance with ICD-10 (International Classification of Diseases, 10th Revision). ПК-4.3: Possesses diagnostic skills for establishing diagnoses based on symptoms and syndromes of disease nosologies in accordance with ICD-10 (International Statistical Classification of Diseases and Related Health Problems, 10th Revision).		Контрольные вопросы Экзамен: Контрольные вопросы Задачи
ПК-5: Готовность к определению тактики ведения пациентов с учетом возраста, с различными нозологическими формами (разработка плана лечения, назначение медикаментозных и немедикаментозных средств согласно клиническим рекомендациям) в том числе оказание паллиативной медицинской помощи	ПК-5.1: Знать алгоритмы постановки диагноза и лечения и тактику ведения пациентов с различными нозологическими формами ПК-5.2: Уметь определять необходимую тактику ведения пациентов с различными нозологическими формами ПК-5.3: Владеть алгоритмами постановки диагноза и лечения и навыком определения тактики ведения пациентов с различными нозологическими формами	ПК-5.1: Know diagnostic algorithms, treatment protocols, and patient management strategies for various disease nosologies. ПК-5.2: Able to determine appropriate management strategies for patients with various disease nosologies. ПК-5.3: Possesses skills in applying diagnostic algorithms, treatment protocols, and determining management strategies for patients with various disease nosologies	Опрос	Зачёт: Контрольные вопросы Экзамен: Контрольные вопросы Задачи

3. Структура и содержание дисциплины

3.1 Трудоемкость дисциплины

	очная
Общая трудоемкость, з.е.	13
Часов по учебному плану	468
в том числе	
аудиторные занятия (контактная работа):	
- занятия лекционного типа	44
- занятия семинарского типа (практические занятия / лабораторные работы)	112
- КСР	4
самостоятельная работа	272
Промежуточная аттестация	36 Экзамен, Зачёт

3.2. Содержание дисциплины

(структурированное по темам (разделам) с указанием отведенного на них количества академических часов и виды учебных занятий)

Наименование разделов и тем дисциплины	Всего (часы)	в том числе			
		Контактная работа (работа во взаимодействии с преподавателем), часы из них			Самостоятельная работа обучающегося, часы
		Занятия лекционного типа	Занятия семинарского типа (практические занятия/ лабора- торные работы), часы	Всего	
	о ф о	о ф о	о ф о	о ф о	о ф о
Unit 1. Introduction to the subject. Interviewing and examination as research methods. The concept of the disease. The scheme of the medical history. Anamnesis.	14	0	4	4	10
Unit 2. The importance of general examination of the patient in the diagnosis of diseases of internal organs.	16	2	4	6	10
Unit 3. Features of complaints and anamnesis data in patients with respiratory system diseases.	16	2	4	6	10
Unit 4. Comparative and topographic percussion of the lungs. Lung auscultation.	18	2	4	6	12
Unit 5. Features of complaints and medical history in patients with cardiovascular pathology.	16	2	4	6	10
Unit 6. Heart percussion and auscultation.	16	2	4	6	10
Unit 7. General principles of diagnosing diseases of the digestive system. Examination of patients with diseases of the biliary tract and liver.	22	2	6	8	14
Unit 8. Examination of patients with diseases of the biliary tract and liver.	0	2	4	0	10
Unit 8. Examination of patients with urinary system diseases.	16	2	4	6	10
Unit 9. Examination of patients with blood diseases.	16	2	4	6	10
Unit 10. Examination of patients with endocrine diseases.	16	2	4	6	10

Unit 11. Examination of patients with musculoskeletal system diseases	16	2	4	6	10
Unit 12. Syndromes of consolidation, cavitation of lung tissue, compressive atelectasis, and fluid accumulation in the pleural cavity.	22	2	6	8	14
Unit 13. Bronchoobstructive Syndrome.	22	2	6	8	14
Unit 14. Introduction to Electrocardiography (ECG). Cardiac Arrhythmia Syndrome.	22	2	6	8	14
Unit 15. Arterial Hypertension Syndrome.	18	2	4	6	12
Unit 16. Coronary Insufficiency Syndrome.	18	2	4	6	12
Unit 17. Chronic Heart Failure Syndrome.	18	2	4	6	12
Unit 18. Syndromes of gastric and Intestinal dyspepsia.	22	2	6	8	14
Unit 19. Main Hepatic Syndromes and diseases of the Biliary Tract:	22	2	6	8	14
Unit 20. Main Syndromes and Kidney Diseases.	22	2	6	8	14
Unit 21. Main Syndromes and Diseases of the Hematologic System	20	2	6	8	12
Unit 22. Main Syndromes and Diseases of the Endocrine System	20	2	6	8	12
Unit 23. Main Diseases of the Musculoskeletal System.	20	2	6	8	12
Аттестация	36				
КСР	4			4	
Итого	468	44	112	160	272

Contents of sections and topics of the discipline

Unit 1. Introduction to Internal Medicine Clinic. Propaedeutics Fundamentals: Concepts of Disease, Symptoms, Syndromes. Diagnostic Process Stages. Medical Ethics Principles. Doctor-Patient Interaction. Outstanding Domestic and Foreign Internists. Patient Interview and Medical History Taking: Formal Documentation, Chief/Secondary Complaints, History of Present Illness (HPI), Life History. Allergy, Transfusion, and Epidemiological History.

Unit 2. The importance of general examination of the patient in the diagnosis of diseases of internal organs. Rules for assessing the general condition and consciousness of the patient. Emotional and psychological state of the patient. General appearance (habitus): body structure, height, weight, constitution, gait, posture, position. Examination of body parts. Assessment of vital signs.

Unit 3. Features of complaints and anamnesis data in patients with respiratory system diseases. General examination and chest examination during the assessment of a patient with respiratory system disorders. Chest shape, symmetry, type, depth, and rhythm of breathing. The significance of chest palpation in respiratory system diseases: tenderness, elasticity, resistance, and detection of vocal fremitus.

Unit 4. Comparative and topographic percussion of the lungs. Clear lung sound and its changes in the presence of consolidation syndrome and increased airiness of lung tissue. Upper and lower borders of the lungs, mobility of the lung edge in normal conditions and in pathology. Rules of lung auscultation. Main types of breathing sounds: vesicular, diminished or increased vesicular, bronchial, bronchovesicular, and amphoric. Adventitious breath sounds: dry and wet rales, crepitations, and pleural friction rub. Causes of their occurrence. Bronchophony. Assessment of External Respiration Function, Peak Flow Measurement.

Unit 5. Features of complaints and medical history in patients with cardiovascular pathology. The importance of general examination and examination of the precordial area in the diagnosis of cardiovascular diseases. The technique for measuring blood pressure. The significance of palpation and percussion in the diagnosis of heart and vascular diseases. Palpation of the pulse and the area of the heart. Characteristics of the pulse and apex beat.

Unit 6. Determination of the borders of absolute and relative dullness of the heart and vascular bundle. Configuration of cardiac dullness. Changes in the results of palpation and percussion in heart and vascular diseases. The significance and rules of auscultation of the heart and vessels in the diagnosis of circulatory system diseases. Heart sounds, their mechanisms of formation, and possible changes. Gallop rhythm. Intracardiac murmurs: organic and functional. Extracardiac murmurs.

Unit 7. General principles of diagnosing diseases of the digestive system. Features of pain syndrome, complaints, and medical history in diseases of the esophagus, stomach, intestines, and pancreas. Physical examination methods for the abdomen: inspection, percussion, auscultation, superficial and deep sliding palpation of the abdomen in the diagnosis of gastrointestinal tract and pancreatic diseases. Laboratory Methods for Stool Analysis. Main Coprological Syndromes. Instrumental methods for pancreas and Intestines investigation. Examination of patients with diseases of the biliary tract and liver. Features of pain syndrome, dyspeptic phenomena, and anamnesis data. The significance of physical examination methods in the diagnosis of hepatobiliary system diseases: general and local inspection, auscultation, palpation, and percussion of the abdomen, liver, gallbladder, and spleen. Pain symptoms in biliary tract pathology.

Unit 8. Methods of examining a patient with urinary system diseases. Features of pain syndrome, complaints, anamnesis data, and physical examination of the patient: general examination, palpation, percussion, and auscultation of the kidneys. Urine analysis. Functional methods for studying kidney function. Radiological diagnostic methods. Invasive methods.

Unit 9. Methods of examining patients with blood diseases. Features of complaints, medical history, and physical examination methods. Laboratory and instrumental studies in the diagnosis of hematopoietic organ diseases: examination of peripheral blood, coagulation system, radioisotope methods, bone marrow analysis, and puncture of lymph nodes, liver, and spleen. Laboratory and Instrumental Diagnostic Methods for Stomach and Duodenum Diseases: Gastric Secretion Study, Endoscopic Examination, Diagnosis of Helicobacter Infection, Radiological Diagnosis.

Unit 10. Features of examining patients with endocrine system diseases: complaints, medical history, general examination, facial expression of the patient, palpation and percussion of the thyroid gland. Laboratory and instrumental methods of investigation in endocrinology. Main physiological pathways for regulating the activity of endocrine glands.

Unit 11. Features of examining a patient with musculoskeletal system diseases: complaints, medical history, and physical examination methods. Laboratory and instrumental diagnostic methods.

Unit 12. Syndromes of consolidation, cavitation of lung tissue, compressive atelectasis, and fluid accumulation in the pleural cavity. Pneumonia: etiology, pathogenesis, classification, clinical picture of lobar and focal pneumonia. Complications of pneumonia. Lung abscess. Dry and exudative pleuritis. Methods of laboratory and instrumental diagnosis. Main Approaches to Treatment.

Unit 13. Bronchoobstructive Syndrome. Syndrome of Air Accumulation in the Pleural Cavity. Acute and Chronic Bronchitis. Chronic Obstructive Pulmonary Disease (COPD). Bronchial Asthma. Respiratory Failure. Cor Pulmonale. Classification, Etiology, Pathogenesis, Clinical Manifestations. Laboratory and Instrumental Diagnostic Methods. Main Approaches to Treatment.

Unit 14. Introduction to Electrocardiography (ECG). ECG Recording. ECG Elements in Normal Conditions and in Cardiac Hypertrophy. Algorithm for ECG Interpretation. Determination of Heart Rate and the Position of the Heart's Electrical Axis. Practical Work: Interpretation of the Electrocardiogram of a Healthy Patient and Patients

with Atrial and Ventricular Hypertrophy. Cardiac Arrhythmia Syndrome. Atrial fibrillation and flutter. Etiology, Pathogenesis, Clinical Manifestations. Laboratory and Instrumental Diagnostic Methods.

Unit 15. Arterial Hypertension Syndrome. Hypertensive Disease and Secondary Arterial Hypertension. Classification, Causes, Pathogenesis, Clinical Manifestations. Features of Laboratory and Instrumental Diagnosis. ECG Changes, Blood Pressure Monitoring, Echocardiography. Principles of Treatment.

Unit 16. Coronary Insufficiency Syndrome. Ischemic Heart Disease. Angina Pectoris. Myocardial Infarction. The Role of Electrocardiography in Diagnosing Ischemic Heart Disease. Patient Management. Practical Work: Interpretation of ECG in Coronary Insufficiency.

Unit 17. Chronic Heart Failure Syndrome. Classification: Stages and Functional Classes of Heart Failure. Laboratory and Instrumental Diagnostic Methods. Principles of Treatment. Patient Management. Heart Defects: Mitral Stenosis, Mitral Insufficiency, Aortic Stenosis, Aortic Insufficiency. Clinical Manifestations, Diagnostic Methods.

Unit 18. Syndromes of Gastric Dyspepsia and Gastrointestinal Bleeding. Acute and Chronic Gastritis. Peptic Ulcer Disease. Classification, etiology, pathogenesis, clinical manifestations, complications. Syndromes of Intestinal Dyspepsia, Intestinal Malabsorption. Chronic Pancreatitis. Crohn's Disease. Ulcerative Colitis. Irritable Bowel Syndrome.

Unit 19. Diseases of the Biliary Tract: Dyskinesia, Chronic Cholecystitis. Etiology, Pathogenesis, Clinical Manifestations. Main Hepatic Syndromes: Parenchymal Inflammation, Jaundice, Cholestasis, Portal Hypertension, Hepatocellular Insufficiency. Acute and Chronic Hepatitis. Liver Cirrhosis. Classification, Etiology, Pathogenesis, Clinical Manifestations. Differential Diagnosis of Jaundice.

Unit 20. Main Syndromes and Kidney Diseases: urinary, nephrotic, nephritic, edematous, hypertensive, infectious-Inflammatory, uremic syndromes. Acute and Chronic Glomerulonephritis. Acute and Chronic Pyelonephritis. Etiology, Pathogenesis, Clinical Manifestations. Laboratory and instrumental investigations.

Unit 21. Main Syndromes and Diseases of the Hematologic System: Anemic, Sideropenic, Hyperplastic, Hemorrhagic, Tumor Intoxication. Anemias. Leukemias. Hemorrhagic Diatheses. Classification, Etiology, Pathogenesis, Clinical Manifestations, Diagnosis.

Unit 22. Main Syndromes and Diseases of the Endocrine System. Hyperthyroidism, Hypothyroidism, Hyperglycemia Syndromes. Diffuse Toxic Goiter. Myxedema. Diabetes Mellitus. Classification, Etiology, Pathogenesis, Clinical Manifestations, Diagnosis, Principles of Treatment.

Unit 23. Main Diseases of the Musculoskeletal System. Rheumatoid Arthritis. Osteoarthritis. Gout. Etiology, Clinical Manifestations, Diagnosis, Principles of Treatment.

4. Учебно-методическое обеспечение самостоятельной работы обучающихся

Самостоятельная работа обучающихся включает в себя подготовку к контрольным вопросам и заданиям для текущего контроля и промежуточной аттестации по итогам освоения дисциплины приведенным в п. 5.

1. Ивашкин. Пропедевтика внутренних болезней : учебник / Ивашкин. - Москва : ГЭОТАР-Медиа, 2023. - 936 с. - ISBN 978-5-9704-7691-8.

2. Заречнева Т. Ю. Пропедевтика внутренних болезней. Курс лекций : учебное пособие для спо / Заречнева Т. Ю. - 3-е изд., стер. - Санкт-Петербург : Лань, 2023. - 80 с. - Книга из коллекции Лань - Медицина. - ISBN 978-5-507-46627-6.

3. Scheme of medical history: Study-guide. 1st ed. - Санкт-Петербург : СЗГМУ им. И.И. Мечникова, 2022. - 36 с. - Книга из коллекции СЗГМУ им. И.И. Мечникова - Медицина.

5. Assessment tools for ongoing monitoring of learning progress and interim certification in the discipline (module)

5.1 Model assignments required for assessment of learning outcomes during the ongoing monitoring of learning progress with the criteria for their assessment:

5.1.1 Model assignments (assessment tool - Interview) to assess the development of the competency ОПК-1:

1. What is the method of examination of the patient's medical history?
2. What is the method of examination of the general examination of the patient?
3. In which joint should movements be performed when performing loud percussion?
4. Specify what is characteristic of central cyanosis.
5. Name the disease in which the forced knee-elbow position (the pose of a "praying Muslim") facilitates the patient's condition.
6. Specify the causes of organic dysphagia.
7. From what level is blood pressure considered elevated, i.e. there is arterial hypertension, at the present time?

5.1.2 Model assignments (assessment tool - Interview) to assess the development of the competency ОПК-5:

1. What indicator content will be increased in the blood when jaundice occurs?
2. What position will the patient take during an attack of cardiac asthma?
3. What pathology is characterized by the appearance of peripheral cyanosis?
4. What disease is characterized by the appearance of a "rotten egg" burp?
5. What disease is the "caput medusae"?

5.1.3 Model assignments (assessment tool - Interview) to assess the development of the competency ПК-3:

1. Which scientist is the founder of electrocardiography?
2. Which scientist first introduced the survey method into the patient's clinical trial scheme?
3. Where is the pain localized in a typical attack of angina pectoris?

4. What is meant by "mitral face"?

5. Where are the electrodes applied when recording the first ECG lead?

5.1.4 Model assignments (assessment tool - Interview) to assess the development of the competency ПК-4:

1. What is a typical clinical manifestation of left ventricular heart failure?

2. What is the value of the alpha angle at the normal position of the electrical axis of the heart?

3. Specify the normal number of leukocytes in the general blood test.

4. Specify the characteristic localization of renal edema.

5. Specify the characteristic localization of cardiac edema.

5.1.5 Model assignments (assessment tool - Interview) to assess the development of the competency ПК-5:

1. What lung disease is characterized by "rusty" sputum?

2. In which disease does the patient's vomiting resemble "coffee grounds"?

3. Where does jaundice appear first?

4. What makes the patient's condition easier in the orthopnea position?

5. Which scientist proposed the term "hypertension"?

Assessment criteria (assessment tool — Interview)

Grade	Assessment criteria
pass	Demonstrates program-appropriate knowledge base with minor inaccuracies.
fail	Knowledge level below minimum requirements. Significant errors were identified.

5.2. Description of scales for assessing learning outcomes in the discipline during interim certification

Шкала оценивания сформированности компетенций

Уровень сформированности компетенций (индикатора достижения)	плохо	неудовлетворительно	удовлетворительно	хорошо	очень хорошо	отлично	превосходно
	не зачтено		зачтено				

компет							
<u>Знания</u>	Отсутствие знаний теоретического материала. Невозможность оценить полноту знаний вследствие отказа обучающегося от ответа	Уровень знаний ниже минимальных требований. Имели место грубые ошибки	Минимально допустимый уровень знаний. Допущено много негрубых ошибок	Уровень знаний в объеме, соответствующем программе подготовки. Допущено несколько негрубых ошибок	Уровень знаний в объеме, соответствующем программе подготовки. Допущено несколько несущественных ошибок	Уровень знаний в объеме, соответствующем программе подготовки. Ошибок нет.	Уровень знаний в объеме, превышающем программу подготовки.
<u>Умения</u>	Отсутствие минимальных умений. Невозможность оценить наличие умений вследствие отказа обучающегося от ответа	При решении стандартных задач не продемонстрированы основные умения. Имели место грубые ошибки	Продemonстрированы основные умения. Решены типовые задачи с негрубыми ошибками. Выполнены все задания, но не в полном объеме	Продemonстрированы все основные умения. Решены все основные задачи с негрубыми ошибками. Выполнены все задания в полном объеме, но некоторые с недочетами	Продemonстрированы все основные умения. Решены все основные задачи. Выполнены все задания в полном объеме, но некоторые с недочетами.	Продemonстрированы все основные умения. Решены все основные задачи с отдельными и несущественными недочетами, выполнены все задания в полном объеме	Продemonстрированы все основные умения. Решены все основные задачи. Выполнены все задания, в полном объеме без недочетов
<u>Навыки</u>	Отсутствие базовых навыков. Невозможность оценить наличие навыков вследствие отказа обучающегося от ответа	При решении стандартных задач не продемонстрированы базовые навыки. Имели место грубые ошибки	Имеется минимальный набор навыков для решения стандартных задач с некоторыми недочетами	Продemonстрированы базовые навыки при решении стандартных задач с некоторыми недочетами	Продemonстрированы базовые навыки при решении стандартных задач без ошибок и недочетов	Продemonстрированы навыки при решении нестандартных задач без ошибок и недочетов	Продemonстрирован творческий подход к решению нестандартных задач

Scale of assessment for interim certification

Grade		Assessment criteria
pass	outstanding	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "outstanding", the knowledge and skills for the relevant competencies have been demonstrated at a level higher than the one set out in the programme.
	excellent	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "excellent",
	very good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "very good",
	good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "good",

	satisfactory	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "satisfactory", with at least one competency developed at the "satisfactory" level.
fail	unsatisfactory	At least one competency has been developed at the "unsatisfactory" level.
	poor	At least one competency has been developed at the "poor" level.

5.3 Model control assignments or other materials required to assess learning outcomes during the interim certification with the criteria for their assessment:

5.3.1 Model assignments (assessment tool - Control questions) to assess the development of the competency ОПК-1

1. What is the method of examination of the patient's medical history?
2. What is the method of examination of the general examination of the patient?
3. In which joint should movements be performed when performing loud percussion?
4. Specify what is characteristic of central cyanosis.
5. Name the disease in which the forced knee-elbow position (the pose of a "praying Muslim") facilitates the patient's condition.
6. Specify the causes of organic dysphagia.
7. From what level is blood pressure considered elevated, i.e. there is arterial hypertension, at the present time?

5.3.2 Model assignments (assessment tool - Control questions) to assess the development of the competency ОПК-5

1. What indicator content will be increased in the blood when jaundice occurs?
2. What position will the patient take during an attack of cardiac asthma?
3. What pathology is characterized by the appearance of peripheral cyanosis?
4. What disease is characterized by the appearance of a "rotten egg" burp?
5. What disease is the "caput medusae"?

5.3.3 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-3

1. Which scientist is the founder of electrocardiography?
2. Which scientist first introduced the survey method into the patient's clinical trial scheme?
3. Where is the pain localized in a typical attack of angina pectoris?

4. What is meant by "mitral face"?

5. Where are the electrodes applied when recording the first ECG lead?

5.3.4 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-4

1. What is a typical clinical manifestation of left ventricular heart failure?

2. What is the value of the alpha angle at the normal position of the electrical axis of the heart?

3. Specify the normal number of leukocytes in the general blood test.

4. Specify the characteristic localization of renal edema.

5. Specify the characteristic localization of cardiac edema.

5.3.5 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-5

1. What lung disease is characterized by "rusty" sputum?

2. In which disease does the patient's vomiting resemble "coffee grounds"?

3. Where does jaundice appear first?

4. What makes the patient's condition easier in the orthopnea position?

5. Which scientist proposed the term "hypertension"?

Assessment criteria (assessment tool — Control questions)

Grade	Assessment criteria
pass	Demonstrates program-appropriate knowledge base with minor inaccuracies.
fail	Knowledge level below minimum requirements. Significant errors were identified.

5.3.6 Model assignments (assessment tool - Control questions) to assess the development of the competency ОПК-1

1. Brief description of Russian therapeutic schools (M.Ya. Mudrov, G.A. Zakharin, S.P. Botkin, V.P. Obratsov, N.D. Strazhesco, G.F. Lang, A.L. Myasnikov, V.H. Vasilenko).

2. The diagnostic significance of complaints, the history of the disease, the patient's life history. The role of G.A. Zakharin in the development of the anamnestic method.

3. Definition of the concepts "symptom", "syndrome", "diagnosis".

4. General examination of the patient. Position, consciousness, gait. Diagnostic value. 5. The patient's body temperature. Methods of temperature measurement (thermometry, thermography). Types of temperature curves.
6. Anthropometric measurements in the clinic. The diagnostic meaning of the concept of the constitution, the main constitutional types.

5.3.7 Model assignments (assessment tool - Control questions) to assess the development of the competency ОПК-5

1. Examination of the skin, subcutaneous adipose tissue, lymph nodes, musculoskeletal system. Diagnostic value.
2. The physical foundations of percussion. Percussion technique, types of percussion. Characteristics of percussion tones. The importance of Auenbrugger's works, the role of Russian scientists in the development of percussion.
3. The physical foundations of auscultation. Methods of auscultation. The role of Laennec in the development of auscultation.
4. Deep, sliding, methodical palpation of the abdomen according to V.P. Obratzov, N.D. Strazhesko in the development of palpation techniques.
5. Diagnostic value of liver biopsy.
6. Features of complaints and anamnesis of patients with diseases of the cardiovascular system.

5.3.8 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-3

1. Organic heart murmurs. Mechanisms of occurrence. Main characteristics
2. Arterial pulse. Examination methods. Main properties of pulse.
3. Arterial blood pressure. Factors determining blood pressure. Measurement methods.
4. Pathogenesis and clinical presentation of pain syndrome in pericarditis and angina pectoris.
5. Edema syndrome in heart diseases. Pathogenesis and clinical characteristics.
6. Acute left ventricular failure syndrome. Etiology, pathogenesis, symptomatology.
7. Chronic circulatory insufficiency syndrome. Etiology, pathogenesis, classification, symptomatology
8. Acute vascular insufficiency syndrome. Etiology, pathogenesis, symptomatology. Clinical forms.

5.3.9 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-4

1. Chronic circulatory insufficiency syndrome. Etiology, pathogenesis, classification, symptomatology.

2. Acute vascular insufficiency syndrome. Etiology, pathogenesis, and symptomatology. Clinical forms.
3. Rheumatism. Rheumocarditis. Symptomatology.
4. Inflammatory myocardial injury syndrome (myocarditis). Etiology, pathogenesis, and symptomatology.
5. Bacterial (subacute, septic) endocarditis. Symptomatology. 30. Syndrome of dry and exudative pericarditis. Etiology, pathogenesis, and symptomatology.
6. Rheumatism. Etiology, pathogenesis. Rheumatic polyarthritis.

5.3.10 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-5

1. Examination of patients with diseases of the cardiovascular system. The patient's position, the condition of the skin. The pathogenesis of cyanosis
2. The apical thrust. The mechanism of occurrence, research methodology. Basic properties. Its change in pathological conditions.
3. Percussion of the heart. Relative and absolute dullness of the heart. Changes in their size and configuration in physiological and pathological conditions
4. Normal heart tones, their characteristics, the mechanism of occurrence. Projection of the heart valves onto the anterior chest wall. The places where the valves are best listened to.
5. Characteristics of cardiac tones in pathological conditions. Changing the strength of tones, bifurcation and splitting of tones, the rhythm of the "gallop", the rhythm of the "quail".
6. Inorganic (functional) cardiac murmurs. Their characteristics and differences from organic ones.

Assessment criteria (assessment tool — Control questions)

Grade	Assessment criteria
outstanding	High level of training, ownership of theoretical material, student demonstrates a creative approach to solving non-standard situations. The student gave a complete and detailed answer to all the theoretical questions of the ticket, confirming the theoretical material with practical examples. The student actively worked in practical classes. 100% completion of control exam tasks.
excellent	High proficiency level with minor inaccuracies. The student provided complete and well-developed answers to all theoretical exam questions, substantiating key concepts with practical examples. Student actively worked in practical classes. Completion of control exam tasks by 90% or higher.
very good	Good preparation. The student provides answers to all the theoretical questions of the ticket, but there are inaccuracies in the definitions of concepts, processes, etc. The student actively worked in practical classes. Completion of control exam tasks from 80 to 90%.
good	Overall, good preparation with noticeable mistakes or shortcomings. The student gives a

Grade	Assessment criteria
	complete answer to all the theoretical questions of the ticket, but there are inaccuracies in the definitions of concepts, processes, etc. Mistakes are made when answering additional and clarifying questions from the examiner. The student was working on practical classes. Completion of control exam tasks from 70 to 80%.
satisfactory	Minimum sufficient level of training. The student shows a minimum level of theoretical knowledge, makes significant mistakes, but when answering leading questions, he can orient himself correctly and give the correct answer in general terms. The student attended practical classes. Completion of control exam tasks from 50 to 70%.
unsatisfactory	The training is insufficient and requires additional study of the material. The student gives erroneous answers, both to the theoretical questions of the ticket, and to the leading and additional questions of the examiner. The student missed most of the practical classes. Completion of control exam tasks up to 50%.
poor	The preparation is absolutely insufficient. The student does not answer the questions asked. The student was absent from most of the lectures and practical classes. Completion of control exam tasks is less than 20%.

5.3.11 Model assignments (assessment tool - Tasks) to assess the development of the competency ОПК-1

Task 1*. The patient complains of shortness of breath and pain in the right side of the chest. On examination: the right hemithorax lags behind during respiration. Respiratory rate is 32 per minute. In the right infrascapular region, vocal fremitus is markedly decreased, percussion sound is dull, the lower lung border at the scapular line is at the level of the 7th rib, vesicular breath sounds are diminished, and bronchophony is decreased. What additional examinations should be conducted based on the preliminary diagnosis?

Task 2**. Which pulmonary syndrome is characterized by the following symptoms: chest pain, shortness of breath, the affected hemithorax is slightly bulging and lags behind during respiration, there is increased vocal fremitus, dull-tympanic percussion sound, pathological bronchial breathing, and increased bronchophony?

Task 3***. Patient K. complains of shortness of breath with difficulty in inspiration. On examination: the right hemithorax lags behind during respiration, respiratory rate is 36 per minute. In the right infrascapular region, vocal fremitus is markedly decreased, bronchophony is absent. On percussion, the sound is dull, the lower lung border is displaced upward, active mobility of the lower lung margin is reduced. Vesicular breath sounds are diminished. Which pulmonary syndrome should be considered?

5.3.12 Model assignments (assessment tool - Tasks) to assess the development of the competency ОПК-5

Task 1***. A 17-year-old girl developed bilateral lower back pain, facial and eyelid edema, fever, decreased urine output, and urine the color of "meat slops" three weeks after recovering from tonsillitis. On examination: pale, puffy face with eyelid edema; narrowed palpebral fissures. The apical impulse is diffuse, enhanced, high-amplitude, and resistant, located at the midclavicular line. Heart sounds are muffled but rhythmic, with an accentuated second sound in the second right intercostal space. Flank tenderness is present bilaterally. Lab tests

show leukocytosis, elevated ESR, hyper-alpha- and hyper-gammaglobulinemia. Urinalysis reveals oliguria, proteinuria, gross hematuria, cylindruria, and hypersthenuria. What additional examinations should be conducted based on the preliminary diagnosis?

Task 2**. A 56-year-old male patient, Mr. S., complains of abdominal distension, lower limb edema, and weight loss. History reveals chronic alcohol abuse. Physical exam shows jaundice of skin, mucous membranes, and sclera; spider angiomas on the upper torso; malar erythema and palmar erythema. The abdomen is distended, assuming a "frog-like" shape when supine, with protruding umbilicus and prominent superficial abdominal veins. The liver extends beyond the costal margin, is firm, nodular with a sharp edge (Kurlov's dimensions: 16×12×11 cm). Spleen measures 14/10 cm. Lab results: total bilirubin 62 µmol/L (direct 38.5, indirect 23.5), positive urine bile pigments. Esophageal X-ray shows varices in the lower third. What disease should be considered?

Task 3*. A 50-year-old male patient, Mr. M., reports poor sleep (superficial, restless, prolonged sleep latency), recurrent headaches (often post-stress, sometimes weather- or exertion-related) with ocular localization. Examination reveals mild overweight. Lungs: normal. Heart: slightly enlarged to the left, forceful apical impulse, clear heart sounds with accentuated second sound in the second right intercostal space. BP: 200/110 mmHg (later normalized). Urinalysis: SG 1020, no protein/sugar, 3-4 WBCs/HPF, occasional squamous epithelial cells. What disease should be considered?

5.3.13 Model assignments (assessment tool - Tasks) to assess the development of the competency IIK-3

Task 1*. Patient D., a 33-year-old male, complains of shortness of breath that appeared after significant physical exertion, accompanied by stabbing pain in the right side of the chest, a feeling of air hunger, and palpitations. X-ray examination reveals a well-defined oval shadow of low intensity near the root of the right lung field, with absent pulmonary vascular markings within the shadow. What disease should be considered?

Task 2**. Patient Z., a 39-year-old male, complains of mixed dyspnea and pressing chest pain. His medical history includes frequent tonsillitis. Examination reveals acrocyanosis. The apical impulse is displaced 1 cm laterally from the midclavicular line, diffuse, enhanced, high-amplitude, and resistant. The heart borders are expanded to the right, upward, and leftward. At the apex, the first heart sound is weakened, with a systolic murmur radiating to the axillary region and an accentuated second sound over the pulmonary artery. What syndrome should be considered?

Task 3***. Patient K., a 48-year-old female, complains of pressing chest pain, dizziness, and frequent fainting spells. Her medical history includes frequent tonsillitis. Examination shows pale skin and acrocyanosis. The apical impulse is displaced 2 cm laterally from the midclavicular line, diffuse, high-amplitude, and resistant. A systolic thrill is palpable in the second intercostal space at the right sternal border. The left heart border is displaced leftward. On auscultation: at the apex, the first sound is weakened, with a systolic murmur radiating to the axillary region; in the second right intercostal space, the second sound is weakened, and a harsh systolic murmur radiating to the carotid arteries is heard. What additional examinations should be conducted based on the preliminary diagnosis?

5.3.14 Model assignments (assessment tool - Tasks) to assess the development of the competency IIK-4

Task 1**. Patient Z., a 52-year-old male, complains of dyspnea, pressing chest pain, and pulsations in the head. He had tonsillitis in childhood. Examination reveals acrocyanosis, carotid pulsations, and synchronous head bobbing. The apical impulse is displaced leftward and dome-shaped. The left heart border reaches the midaxillary line. On auscultation: at the apex, the first sound is weakened, with a systolic murmur radiating to

the axillary region; in the second right intercostal space, the second sound is weakened, and a diastolic murmur radiating to the third left intercostal space is heard. What diagnosis may be considered?

Task 2***. Patient K., a 58-year-old male, was admitted to the hospital with burning retrosternal pain radiating to the left arm, shoulder, and jaw, accompanied by severe weakness, dizziness, and a feeling of air hunger. His medical history includes arterial hypertension up to 160/100 mm Hg with irregular treatment. For the past 3 years, he has experienced exertional angina attacks relieved by nitroglycerin. The current attack occurred after stress and was not relieved by nitroglycerin. On admission: severe condition, acrocyanosis, BP 80/40 mm Hg, HR 110 bpm. The heart borders are expanded leftward. Heart sounds are muffled, with a systolic murmur at the apex. Lab tests show a positive troponin test. ECG reveals ST segment elevation in leads I, aVL, V2-V6 and depression in leads II, III, aVF. What disease should be considered?

Task 3*. Patient V., a 56-year-old male, presented with typical exertional angina attacks (occurring after walking 200 m or climbing one flight of stairs), relieved by nitroglycerin, as well as dyspnea during normal activity, headaches, and fatigue. His medical history includes arterial hypertension up to 170/100 mm Hg for 6 years without regular treatment. Examination reveals obesity (weight 98 kg, height 178 cm), acrocyanosis, BP 160/100 mm Hg. ECG shows signs of left ventricular hypertrophy (Sokolow-Lyon index 42 mm) and negative T waves in V1-V5. What additional examinations should be conducted based on the preliminary diagnosis?

5.3.15 Model assignments (assessment tool - Tasks) to assess the development of the competency IIK-5

Task 3*. Patient N., a 54-year-old female, has experienced headaches related to stress and weather changes, dizziness, palpitations, and dyspnea during mild exertion for 6 years. Examination revealed arterial hypertension (170/100 mm Hg), obesity (BMI 30.3 kg/m²), and ECG signs of left ventricular hypertrophy (Sokolow-Lyon index 45 mm) with ischemic changes in leads I, aVL, V5-V6. What disease should be considered and investigations may be prescribed?

Task 4**. Patient B., a 34-year-old male, was admitted with fever up to 39°C, weight loss of 5 kg over a month, night sweats, leg edema, and vision deterioration. His medical history includes a groin abscess 2 months ago and long-term drug use. Examination shows injection marks, petechiae, and hepatosplenomegaly. Auscultation reveals murmurs of mitral and tricuspid regurgitation. Lab tests show anemia, leukocytosis, high ESR, and positive blood culture for *Staphylococcus aureus*. Echocardiography detected vegetations on the valves. What disease should be considered and what investigations may be performed?

Task 5***. Patient A., 41 years old, complains of aching pain in the heart area, palpitations, irregular heartbeat, dyspnea on moderate physical exertion, low-grade fever (up to 37.5°C), sweating, weakness, and rapid fatigue. History: Three weeks after a viral infection, the above symptoms appeared. The patient did not seek medical help and received no treatment. This is his first visit to a doctor. Physical examination: The condition is of moderate severity. The skin is pale, with hyperhidrosis. Vesicular breathing, no adventitious lung sounds. Respiratory rate 18/min. The apex beat is located in the 5th intercostal space along the left midclavicular line; it is diffuse, weakened, low-amplitude, and poorly resistant. Percussion reveals the following borders of relative cardiac dullness: right – 2 cm lateral to the right sternal border, upper – 2nd intercostal space, left – 5th intercostal space along the left midclavicular line. Heart sounds are muffled, rhythmic, with tachycardia up to 110/min. Blood pressure 100/60 mmHg. The abdomen is soft and non-tender. Liver size by Kurlow: 10×8×7 cm; the spleen is not palpable. Additional tests: Complete blood count: RBC $3.2 \times 10^{12}/L$, Hb 134 g/L, WBC $9.6 \times 10^9/L$ (band neutrophils 6%, segmented neutrophils 73%, lymphocytes 16%, monocytes 5%), ESR 24 mm/h. Biochemical blood test: CRP (++), fibrinogen 5.4 g/L, total protein 60 g/L. ECG: Sinus tachycardia (112/min), low-voltage QRS complexes, first-degree AV block, occasional supraventricular extrasystoles, ST-segment depression below the isoelectric line, diffuse metabolic changes in the myocardium. Echocardiography:

No chamber dilation, intact valve apparatus, preserved myocardial systolic function. What diagnosis should be considered?

Assessment criteria (assessment tool — Tasks)

Grade	Assessment criteria
outstanding	High level of training, ownership of theoretical material, student demonstrates a creative approach to solving non-standard situations. The student gave a complete and detailed answer to all the theoretical questions of the ticket, confirming the theoretical material with practical examples. The student actively worked in practical classes. 100% completion of control exam tasks.
excellent	High proficiency level with minor inaccuracies. The student provided complete and well-developed answers to all theoretical exam questions, substantiating key concepts with practical examples. Student actively worked in practical classes. Completion of control exam tasks by 90% or higher.
very good	Good preparation. The student provides answers to all the theoretical questions of the ticket, but there are inaccuracies in the definitions of concepts, processes, etc. The student actively worked in practical classes. Completion of control exam tasks from 80 to 90%.
good	Overall, good preparation with noticeable mistakes or shortcomings. The student gives a complete answer to all the theoretical questions of the ticket, but there are inaccuracies in the definitions of concepts, processes, etc. Mistakes are made when answering additional and clarifying questions from the examiner. The student was working on practical classes. Completion of control exam tasks from 70 to 80%.
satisfactory	Minimum sufficient level of training. The student shows a minimum level of theoretical knowledge, makes significant mistakes, but when answering leading questions, he can orient himself correctly and give the correct answer in general terms. The student attended practical classes. Completion of control exam tasks from 50 to 70%.
unsatisfactory	The training is insufficient and requires additional study of the material. The student gives erroneous answers, both to the theoretical questions of the ticket, and to the leading and additional questions of the examiner. The student missed most of the practical classes. Completion of control exam tasks up to 50%.
poor	The preparation is absolutely insufficient. The student does not answer the questions asked. The student was absent from most of the lectures and practical classes. Completion of control exam tasks is less than 20%.

6. Учебно-методическое и информационное обеспечение дисциплины (модуля)

Основная литература:

1. Заречнева Т. Ю. Пропедевтика внутренних болезней. Курс лекций : учебное пособие для спо / Заречнева Т. Ю. - 3-е изд., стер. - Санкт-Петербург : Лань, 2023. - 80 с. - Книга из коллекции Лань -

Медицина. - ISBN 978-5-507-46627-6., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=862237&idb=0>.

2. Scheme of medical history: Study-guide. 1st ed. - Санкт-Петербург : СЗГМУ им. И.И. Мечникова, 2022. - 36 с. - Книга из коллекции СЗГМУ им. И.И. Мечникова - Медицина., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=898500&idb=0>.

3. Ивашкин. Пропедевтика внутренних болезней : учебник / Ивашкин. - Москва : ГЭОТАР-Медиа, 2023. - 936 с. - ISBN 978-5-9704-7691-8., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=869905&idb=0>.

Дополнительная литература:

1. Ивашкин. Пропедевтика внутренних болезней : учебник / Ивашкин. - Москва : ГЭОТАР-Медиа, 2023. - 936 с. - ISBN 978-5-9704-7691-8., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=869905&idb=0>.

2. Semiotics of acquired heart valvular defects : tutorial for the 2-nd and 3-rd year students of pediatric and general medical faculties / Timofeev E. V., Parfenova N. N., Reeva S. V., Malev E. G., Isakov V. A., Mogileva I. I., Galfanovitch I. L., Daineko M. Y. - Санкт-Петербург : СПбГПМУ, 2023. - 20 с. - Книга из коллекции СПбГПМУ - Медицина. - ISBN 978-5-907748-53-8., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=929979&idb=0>.

3. Мухин Н.А. Пропедевтика внутренних болезней : учебник / Мухин Н.А.; Моисеев В.С. - Москва : ГЭОТАР-Медиа, 2023. - 848 с. - ISBN 978-5-9704-7981-0., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=870559&idb=0>.

Программное обеспечение и Интернет-ресурсы (в соответствии с содержанием дисциплины):

ЭБС «Юрайт». Режим доступа: <http://biblio-online.ru>.

ЭБС «Консультант студента». Режим доступа: <http://www.studentlibrary.ru>.

ЭБС «Лань». Режим доступа: <http://e.lanbook.com/>.

ЭБС «Znaniyum.com». Режим доступа: www.znaniyum.com

7. Материально-техническое обеспечение дисциплины (модуля)

Учебные аудитории для проведения учебных занятий, предусмотренных образовательной программой, оснащены мультимедийным оборудованием (проектор, экран), техническими средствами обучения, компьютерами, специализированным оборудованием: Кушетка, стетофонендоскоп, симулятор для отработки навыков аускультации (Симулятор Аускультации, Российская Федерация), манекен для отработки навыков аускультации (3b scientific SAM4), Манекен-тренажер CPR + Блок контроля навыков манекена-тренажера, тренажер для пальпации, Тренажёр-симулятор автоматического наружного дефибриллятора (AED120), Симулятор физического обследования кардиологического пациента, Робот-пациент реанимации и анестезиологии

Помещения для самостоятельной работы обучающихся оснащены компьютерной техникой с возможностью подключения к сети "Интернет" и обеспечены доступом в электронную информационно-образовательную среду.

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