MINISTRY OF HEALTH OF UKRAINE

ODESA NATIONAL MEDICAL UNIVERSITY

Department of Propaedeutics of Internal Diseases and therapy

CONFIRMED by
Rector for scientific and pedagogical work

_____ Eduard BURIACHKIVSKYI

01.09.2024

WORKING PROGRAM IN THE DISCIPLINE "PROPAEDEUTIC OF INTERNAL MEDICINE"

Level of higher education: second (master's degree)

Field of knowledge: 22 «Health care»

Specialty: 222 «Medicine»

Educational and professional program: Medicine

2024

The working program is compiled on the basis of the educational and professional program "Medicine" for the training of specialists of the second (master's) level of higher education in the specialty 222 "Medicine" of the field of knowledge 22 "Health care", approved by the Academic Council of ONMedU (minutes No. 10 dated 27/06/2024).

Authors:
Head of the department, Doctor in Medicine, Professor Yakimenko Olena
Doctor in Medicine, Associate Professor Sebov Denis
PhD of Medicine, Assistant Professor Oliynyk Dmytro
PhD of Medicine, Assistant Professor Maznichenko Iegor
Assistant Professor, PhD of Medicine Markina Kateryna

The working program is approved at the meeting of the department of propaedeutic of internal medicine Minutes No._ dated 27/08/2024.

Head of the department _____ Olena YAKIMENKO

Approved by the guarantor of
the educational and professional program _____ Valeriia MARICHEREDA

Approved by the subject-cycle methodological commission for therapeutic of ONMedU
Minutes No. 1 dated 30/08/2024

Head of the subject-cycle methodological
commission for therapeutic of ONMedU _____ Olena VOLOSHYNA

Revised and approved at the meeting of the department of propaedeutic of internal medicine
Minutes No. __ dated __/__/20__.

Head of the department _____ Olena YAKIMENKO

Revised and approved at the meeting of the department of propaedeutic of internal medicine
Minutes No. __ dated __/__/20__.

Head of the department _____ Olena YAKIMENKO

1. Description of the academic discipline:

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the academic discipline
Total number: Credits: 5 Hour: 150 Content modules: 13	Discipline 22 "Health care" Specialty 222 "Medicine" Level of higher education the second (master's**)**	*Full-time education* *Mandatory discipline*
		Year of training: 3
		Semesters V-VI
		Lectures (8 p.m.)
		Seminars (0 hours)
		Practical (80 year.)
		Laboratory (0 hours)
		Independent work (50 year.)
		including individual tasks (0 hours)
		Final control form - differentiated assessment

2. The purpose and tasks of the educational discipline, competences, program learning outcomes.

Goal: Acquisition of knowledge and formation of elements of professional competences by the student of higher education examination of the patient and assessment of the main manifestations of diseases of internal organs and improvement of skills and competences acquired during the study of previous disciplines to achieve the main final goals defined in the Standard of training of a specialist in the specialty 222 "Medicine".

Task:

1. Formation of skills and abilities: conducting a survey and physical examination of patients, analyzing their results in the internal medicine clinic.

2. Mastering the ability to analyze the results of the main laboratory and instrumental research methods, to determine the leading symptoms and syndromes in the internal medicine clinic.

The process of studying the discipline is aimed at forming elements of the following competencies**:**

- **General (ZK):**

ZK1. Ability to abstract thinking, analysis and synthesis
ZK3. Ability to apply knowledge in practical situations
ZK4. Knowledge and understanding of the subject area and understanding of professional activity
ZK7. Ability to work in a team
ZK8. Ability to interpersonal interaction
ZK10. Ability to use information and communication technologies
ZK11. Ability to search, process and analyze information from various sources
ZK12. Determination and persistence in relation to assigned tasks and assumed responsibilities
ZK13. Awareness of equal opportunities and gender issues
ZK14. The ability to realize one's rights and responsibilities as a member of society, to be aware of the values of a public (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine

ZK15. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technologies, to use various types and forms of motor activity for active recreation and leading a healthy lifestyle
ZK16. The ability to evaluate and ensure the quality of the work performed
ZK17. The desire to preserve the environment

- **Special (SK):**

SK1. Ability to collect medical information about the patient and analyze clinical data
SK2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results
SK3. Ability to establish a preliminary and clinical diagnosis of the disease
SK4. The ability to determine the necessary regime of work and rest in the treatment and prevention of diseases
SK5. The ability to determine the nature of nutrition in the treatment and prevention of diseases
SK6. Ability to determine the principles and nature of treatment and prevention of diseases
SK10. Ability to perform medical manipulations.
SK11. The ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility, including the system of early intervention.
SK16. Ability to maintain medical documentation, including electronic forms
SK17. The ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population
SK21. The ability to clearly and unambiguously convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying
SK24. Adherence to ethical principles when working with patients and laboratory animals
SK25. Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results

Program learning outcomes (PRL):

PRN1. Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.
PRN3. Specialized conceptual knowledge that includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems, including the system of early intervention.
PRN4. Identify and identify leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).
PRN5. Collect complaints, anamnesis of life and diseases, evaluate the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information about the diagnosis (according to list 4), taking into account the age of the patient.
PRN6. To establish a final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis, observing the relevant ethical and legal norms, under the control of the head physician in the conditions of the health care institution (according to the list 2).

PRN7. Assign and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4), patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).
PRN8. To determine the main clinical syndrome or symptom, which determines the severity of the condition of the victim/victim (according to list 3) by making a reasoned decision about the condition of a person under any circumstances (in the conditions of a health care institution, outside its borders), including in conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.
PRN9. Determine the nature and principles of treatment (conservative, operative) of patients with diseases (according to list 2), taking into account the patient's age, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme, be able to justify personalized recommendations under the control of the head physician in the conditions of a medical institution.
PRN10. Determine the necessary mode of work, rest and nutrition based on the final clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
PRN17. Perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.
PRN18. Determine the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data about the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical documentation regarding the patient and population cohort on the basis of regulatory documents.
PRN21. Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.
PRN24. To organize the necessary level of individual safety (own and the persons he cares for) in case of typical dangerous situations in the individual field of activity.
PRN30. Determine the management tactics of persons subject to dispensary supervision (children, pregnant women, workers whose professions require mandatory dispensary examination).

As a result of studying the academic discipline, the student of higher education must:

Know:

- The most important etiological and pathogenetic factors in the formation of pathological processes in the human body.
- Methodological basis of clinical examination of the patient, scheme of patient examination and writing of medical history.
- Methodological foundations of survey and physical examination patient - examination, palpation, percussion, auscultation.
- The most important symptoms and syndromes in the clinic of internal diseases and their semiological interpretation.
- Clinical and diagnostic interpretations of indicators of the most important laboratory and instrumental studies.

Be able:

- Conduct surveys and physical examinations of patients and analyze their results in the internal medicine clinic.
- To draw up a patient examination plan for the typical course of the most common therapeutic diseases.
- Analyze the results of basic laboratory and instrumental research methods.
- To determine the leading symptoms and syndromes in the clinic of internal diseases.
- Demonstrate the ability to methodically correctly present the results of the patient's examination in the form of a medical history with the justification of the syndromic diagnosis.

3. Content of the academic discipline
Content module #1
Introduction to propaedeutics of internal diseases

Topic 1. Tasks of the department of propaedeutics of internal diseases. Scheme of medical history. Examination of the patient. General examination of the patient, individual parts of the body. The diagnostic value of the symptoms detected during the examination of the patient.

Propaedeutics of internal medicine as an introduction to clinical practice. The history of the development of propaedeutics of internal medicine in Ukraine and abroad. The contribution of famous clinicians to the development of the domestic propaedeutic school. The main goals and objects of study of propaedeutic medicine. The main methods of examination of patients in the clinic of internal diseases: physical, instrumental, laboratory. Medical history: its main sections and rules for compilation. The method of questioning the patient, its diagnostic value, the systematicity of the conduct taking into account the individual, intellectual and psychological characteristics of the patient. The main structural parts of the anamnesis (passport part, patient complaints, disease anamnesis, questioning of organs and systems, life anamnesis).

Determination of the general condition of the patient (types of general conditions of the patient and their criteria), assessment of his state of consciousness (types of consciousness disorders), posture, gait (types of posture and gait in various pathologies), position in bed (active, passive, forced, their types) . Physique and main criteria of normal constitutional types. Skin, its properties (color, elasticity, moisture, temperature, rash elements, nevi, scars, scars) and pathological changes; condition assessment hair and nails Subcutaneous tissue (obesity, distribution, types of obesity), condition of muscles and musculoskeletal system. Sequence of palpation of lymph nodes. The diagnostic value of the symptoms obtained during the general examination of the patient.

Methodology and sequence of examination of the head and neck, limbs and trunk, abdomen and chest. The diagnostic value of the symptoms obtained during the examination of individual parts of the body of an animalrogo.

Topic 2. The main complaints of patients with respiratory diseases. Static and dynamic examination of the chest. Palpation of the chest.

The sequence of clarification and detailing of the most important subjective symptoms and their semiological evaluation. Peculiarities of finding out the anamnesis of the disease and life. The technique of conducting a static and dynamic examination of the chest. Determination of topographic areas and physiological formations on the chest and their diagnostic value. Physiological and pathological forms of the chest, their criteria. Pathological forms of breathing (Cheyne-Stokes, Biot, Kussmaul, Grokko), their characteristics and causes. The sequence of chest palpation, determination of voice tremor and semiological evaluation of its results.

Content module #2
Examination of respiratory organs

Topic 3. Lung percussion. Methodology and technique of conducting comparative lung percussion.

The history of the formation of percussion as a method of physical examination. The role of percussion in determining the state of the lungs. Classificationand percussion according to the goals, according to the force of percussive impact, according to the method of conducting. Varieties and conditions of occurrence of percussive tones. Main topographic areas and landmarks on the surface of the chest. The main tasks and methods of performing comparative lung percussion. Algorithm for comparative lung percussion. Characteristic consistency and diagnostic value of the obtained data. The causes of dull, tympanic, dull-tympanic, box percussion tones over the lungs.

Topic 4. Lung percussion. Methodology and technique of conducting topographic percussion of the lungs.

The main tasks and sequence of topographic percussion of the lungs. Determination of the standing height of the tops of the lungs from the front and back, the width of the Krenig fields. The sequence of determining the lower border of the lungs, active and passive mobility of the lower lung border. Traube's space, its importance in lung pathology.
The results of comparative and topographic percussion of the lungs in the syndromes of compaction of lung tissue, accumulation of fluid and air in the pleural cavity, increased airiness of lung tissue, formation of a cavity in the lungs.

Topic 5. Auscultation of the lungs: basic respiratory sounds (vesicular and bronchial breathing).

Auscultation as a method of physical examination of the patient. Rules for using a stethoscope and phonendoscope. Methodology of preliminary comparative lung auscultation. Basic respiratory noises: vesicular and bronchial breathing, their quantitative and qualitative changes, conditions of occurrence. The method of determining bronchophonia and its diagnostic value.

Topic 6. Auscultation of the lungs: additional respiratory sounds (crepitation, wheezing, pleural friction noise).

Types of secondary respiratory noises (wheezing, crepitation, pleural friction noise). Causes of dry and wet wheezing, their types. Diagnostic significance of consonant and non-consonant wheezing. Conditions for crepitation and pleural friction noise. Differential signs of additional respiratory sounds. Additional auscultatory phenomena (splash noise Hippocrates, noise of a falling drop), causes of their occurrence and diagnostic significance.

Content module #3
Examination of organs of the cardiovascular system

Topic 7. Questioning and general examination of patients with pathology of the cardiovascular system. Treatment of patients. Examination of the pulse and measurement of blood pressure.

The meaning of inquiry. The sequence of clarifying and detailing the complaints of a patient with cardiovascular pathology. Peculiarities of collecting medical and life anamnesis. Conducting a general examination of a cardiology patient. Examination of the pulse (arterial, venous). Rules and sequence of pulse research on the radial artery. Determination of the main properties of the pulse (synchronicity, rhythmicity, frequency, tension, filling, height, speed, uniformity), detection of deficiency, lability, paradoxicality, dicroticity of the pulse. Rules for measuring

blood pressure on the upper and lower extremities. Basic methods of blood pressure determination. Korotkov's concept of tones. The main parameters determining systolic and diastolic blood pressure. The concept of pulse and average dynamic blood pressure. Normal values of blood pressure in accordance with the criteria WHO/MTG.

Topic 8. Inspection and palpation of the atrial region. Percussion determination of the limits of relative and absolute cardiac dullness.

The sequence of examination of the heart area. The diagnostic value of a heart hump, pulsations in the heart and neck area. Methodology and technique of palpation of the precardial area: apical impulse (localization, area, force, height, resistance, miscibility, causes of negative apical impulse); heart attack, causes of its appearance and method of detection; pulsation of the abdominal part of the aorta, liver, Plesh's symptom, pulsation of the ascending part of the aorta and its arch, detection of pulsation of the pulmonary trunk. Presystolic and systolic tremor (symptom of "cat's purr"), causes of occurrence.

The concept of relative and absolute heart dullness, their percussive definition (sequence: right, upper, left border) and changes in pathological conditions. Structures forming a vascular bundle, percussive determination of its width.

Topic 9. Auscultation of the heart: heart sounds, their splitting, bifurcation, additional tones.

Methods and techniques of auscultation of the heart. Main and additional points of auscultation. Places of projection and best auscultation of heart valves. Mechanism of formation of heart sounds. Reasons for strengthening and weakening of tones. Tone accent. Tone changes by timbre (clap, muffled, velvety, metallic, cannon tones). The concept of splitting and bifurcation of heart sounds, their causes and time characteristics. Additional tones are the opening tone of the mitral valve, gallop tones (protodiastolic, mesodiastolic and presystolic gallop rhythm). Methodological features of auscultation of the heart - directly with the ear, stethoscope, phonendoscope: in the position of the patient standing, lying down, in a state of rest and after physical exertion.

Topic 10. Auscultation of the heart: organic and functional heart sounds.

Causes and classification of heart murmurs (intracardiac and extracardiac, organic and functional, systolic and diastolic, expulsion, filling, regurgitation). The rules of listening and the algorithm for characterizing heart sounds: relation to the phases of cardiac activity, the best place for listening, venues, nature, intensity, shape, connection with heart sounds, changes depending on the position of the body (vertical, horizontal) and physical exertion. Determination of auscultatory symptoms of Sirotinin-Kukoverov and Udintsev. The concept of functional noises and their differences from organic heart murmurs. Extracardiac murmurs. Pericardial friction noise, pleuropericardial murmur, cardiopulmonary noise. "Spin" noise on the jugular vein. Traube's double tone and Vinogradov-Durozier murmur on the femoral artery: method of determination, causes and mechanism of occurrence.

Content module #4
Instrumental methods of research of organs of the cardiovascular system

Topic 11. Methodology of ECG registration and decoding. ECG signs of ventricular and atrial hypertrophy.

Clinical and diagnostic value of the electrocardiography method. Biophysical and physiological foundations of ECG. The structure and function of heart rhythm drivers and conductor systems. The main and additional ways of impulse conduction. Methodology and technique of ECG registration: standard leads, unipolar leads from the extremities, chest leads. The main elements

of the ECG: the value of the duration and amplitude of the waves, the duration of intervals and segments in the norm. Algorithm and technique of ECG decoding. ECG signs of hypertrophy of the right and left atria and ventricles.

Topic 12. ECG signs of violations of automaticity and excitability.
The main structures that ensure the automatic function of the heart. ECG signs of automaticity disorders: sinus tachycardia, sinus bradycardia, sinus arrhythmia, sinus node weakness syndrome. Types of extrasystoles. ECG signs of sinus, atrial, atrio-ventricular and ventricular extrasystoles. Differentiation of right and left ventricular extrasystoles. Classification of ventricular extrasystoles. Types of allorhythms.

Topic 13. ECG signs of conduction disorders. Basics of electroimpulse therapy.
Time conduction of the impulse through various departments of the conduction system of the heart. ECG signs of sinoatrial and intraatrial blockade. Classification and ECG signs of atrio-ventricular blockade. Morgagni–Adams–Stokes attacks, their causes and clinical manifestations. Intraventricular blockades, differentiation of blockades of the left and right bundle of His bundle. Acquaintance with the indications for conducting and the rules for performing electroimpulse therapy.
ECG and clinical signs of atrial fibrillation and flutter. Clinical manifestations and ECG signs in ventricular flutter, paroxysmal ventricular tachycardia, ventricular fibrillation.

Content module No. 5
Examination of organs of the gastrointestinal tract and hepatobiliary system

Topic 14. Questioning and examination of patients with diseases of the digestive organs. Examination and superficial palpation of the abdomen. Deep sliding methodical palpation of the intestines and stomach.
The method of questioning and detailing the complaints of a patient with a pathology of the gastrointestinal tract. Peculiarities of collecting medical and life anamnesis. Changes in the appearance of the patient with various pathologies of the gastrointestinal tract. The sequence of the examination of the abdomen (shape, dimensions, symmetry, condition of the skin and navel, obesity, condition of subcutaneous vessels, pattern of hair). The concept of topographic zones and topographic lines on the surface of the abdomen. Tasks and methods of superficial palpation of the abdomen (palpation to the arc of the greater and lesser radius, checking for symptoms of peritoneal irritation, detection of separation of rectus abdominis muscles, presence of umbilical hernias and hernias of the white line of the abdomen). Methods of detecting ascites (survey, percussion, fluctuations).

Topic 15. Deep sliding palpation of the abdomen.
The sequence of conducting deep sliding methodical palpation of the intestinal sections according to the Obraztsov-Strazheska method: normal parameters of the sigmoid, cecum, terminal ileum, ascending, descending and transverse colon. Methods of determining the lower border of the stomach (percussion, palpation, stetoacoustic, by the sound of a splash). Rules of palpation of the goalkeeper.

Topic 16. Examination of patients with liver and biliary tract disease. Review. Percussion. Palpation. Palpation of the liver and spleen, determination of their size by the Kurlov method.
Methods of questioning a patient with liver pathology. Main complaints. Abdominal examination. Determining the size and limits of the liver according to the methods of Obraztsov

and Kurlov. Reasons for increasing and decreasing the size of the liver. The technique of deep sliding palpation of the liver. Characteristics of the normal palpation picture and possible changes of the lower edge of the liver in pathology. The technique of percussive determination of the size of the spleen, the main reasons for its increase. Rules for palpation of the spleen.

Topic 17. Differential diagnosis of jaundice.
The main manifestations of jaundice syndrome and cholestasis syndrome, their laboratory signs.

Topic 18. Syndrome of functional insufficiency of liver cells. Portal hypertension. Hepatolienal syndrome.
Definition of the main syndromes in liver pathology. Syndrome of portal hypertension, liver failure and hepatolienial syndrome in liver lesions.

Content module No. 6
Examination of patients with diseases of the kidneys and urinary tract

Topic 19. Examination of patients with diseases of the kidneys and urinary tract. Questioning Inspection, percussion, palpation. Laboratory, instrumental, X-ray, morphological examination of kidneys.
The main complaints of patients with kidney pathology. Review methodology. The diagnostic value of determining Pasternacki's symptom. Methods of palpation of the kidneys in standing and lying positions. Diagnostic value of instrumental methods of kidney research.

Topic 20. Research of urine. Methods of urine research: general analysis of urine, test of Zimnytskyi, Ambyurzhe, Nechyporenko, etc.
Clinical interpretation of the general analysis of urine, functional (Zymnytskyi, Reberg) and quantitative tests (Ambyurge, Nechyporenko).

Content module No. 7
Examination of patients with blood diseases
Topic 21. Examination of patients with blood diseases. Questioning Review. Palpation. Percussion.
The main complaints of patients with blood diseases. Review data. The main types of bleeding.

Topic 22. Blood research. Clinical interpretation of blood analysis.
Palpation data of lymph nodes, liver, spleen. Clinical interpretation of general blood analysis.

Content module #8
Main symptoms and syndromes in respiratory diseases

Topic 23. Pneumonia: Symptoms and syndromes. Clinical-instrumental and laboratory research methods. Respiratory failure syndrome in the pathology of the bronchopulmonary system.
Definition and modern classification of pneumonias (hospital, non-hospital, aspiration, pneumonia in immunocompromised persons), classification by the nature of lung damage (pleuropneumonia, bronchopneumonia, interstitial pneumonia). The main etiological factors of pneumonia. Complaints of patients and peculiarities of these physical methods of examination of patients with pleuro- and bronchopneumonia. Criteria for a severe course of pneumonia. Possibilities of instrumental diagnosis of pulmonary tissue compaction. Laboratory signs of inflammatory syndrome in pneumonia. Pulmonary tissue compaction syndrome.

Topic 24. Symptoms and syndromes in chronic obstructive pulmonary disease, bronchial asthma, bronchitis, pulmonary emphysema. Data analysis of instrumental research methods. The concept of impaired function of external breathing. Spirography.

Definition and main mechanisms of development of chronic obstructive pulmonary disease and bronchial asthma. Main complaints and physical examination data of patients with chronic obstructive pulmonary disease and bronchial asthma. Syndrome of bronchial obstruction, mucociliary insufficiency and increased airiness of the lungs. Basic methods of instrumental diagnostics. Laboratory signs of bronchial asthma based on general blood analysis and sputum examination. Definition and main clinical manifestations of bronchiectasis. The concept of chronic obstructive pulmonary disease.

Topic 25. Main symptoms and syndromes in dry and exudative pleurisy, lung abscess, gangrene, bronchiectasis. Lung cancer. Respiratory failure syndrome in the pathology of the bronchopulmonary system.

Causes of inflammation of the pleural sheets. Ways of formation and circulation of intrapleural fluid in normal and pathological conditions. Peculiarities of complaints of patients with dry and exudative pleurisy, differences in physical examination data (palpation, percussion, auscultation of the lungs) with different forms of pleurisy. Syndrome accumulation of fluid and air in the pleural cavity. Possibilities of instrumental diagnostics. Pleural puncture: examination of the contents of the pleural cavity. Difference between exudate and transudate according to physical and laboratory examination data. The main clinical manifestations and stages of respiratory failure syndrome in lung diseases.

Topic 26. Main symptoms and syndromes in lung abscess, gangrene, bronchiectasis. Lung cancer.

Causes of the development of inflammation in the lung tissue. Peculiarities of complaints of patients with lung abscess, gangrene, bronchiectasis, lung cancer. Main clinical manifestations. Possibilities of laboratory and instrumental diagnostics.

Content module #9
The main symptoms and syndromes in diseases of the cardiovascular system

Topic 27. Symptoms and syndromes in aortic heart defects.

Etiological factors and mechanisms of development aortic insufficiency and aortic stenosis. Hemodynamic changes in aortic heart defects. The main complaints of patients with aortic stenosis and aortic valve insufficiency. Data of examination, palpation of the atrial region and percussion in aortic heart defects. Auscultatory picture of stenosis of the aortic orifice and aortic insufficiency. ECG and FCG signs of aortic heart defects. X-ray signs of aortic defects.

Definition and spread of heart defects, frequency of damage to heart valves. Rheumatism, modern classification and main clinical manifestations.

Topic 28. Symptoms and syndromes in mitral heart defects.

The main causes and mechanisms of the development of mitral insufficiency and mitral stenosis. Hemodynamic changes in mitral heart defects. The value of the Kitaev reflex. The main complaints of patients with mitral stenosis and mitral valve insufficiency. Data of examination, palpation of the atrial region and percussion in mitral heart defects. Auscultatory picture of mitral stenosis and mitral insufficiency. ECG and FCG signs of mitral heart defects. X-ray signs of mitral defects.

Definition and spread of heart defects, frequency of damage to heart valves. Rheumatism, modern classification and main clinical manifestations.

Topic 29. Symptoms and syndromes in hypertension and secondary arterial hypertension. Hypertensive crises.

Definition of WHO/MTH for arterial hypertension, essential hypertension (hypertensive disease) and symptomatic hypertension. The main risk factors of hypertension and mechanisms of its development. Classification of hypertensive disease according to blood pressure level and target organ damage. The main complaints of a hypertensive patient, examination data, palpation of the precardial region, percussion of the borders of cardiac dullness and auscultation of the heart. ECG signs of myocardial changes in hypertension. Symptomatic hypertension. Complicated and uncomplicated hypertensive crises.

Topic 30. Ischemic heart disease: symptoms and syndromes in angina and myocardial infarction.

Definition of the term "coronary heart disease" (CHD). Main pathogenetic mechanisms and risk factors of CHD. Modern classification of CHD. Definition and main clinical manifestations of angina pectoris. Functional classes of angina pectoris. Methods of objective diagnosis of angina pectoris (ECG, daily ECG monitoring, exercise tests, coronary angiography, scintigraphy hearts). Unstable angina, concept of acute coronary syndrome. Definition and main clinical manifestations of acute myocardial infarction. Data of physical methods of examination of patients with acute myocardial infarction. Periodization of myocardial infarction. ECG changes in various forms of myocardial infarction in different periods of its course. Modern laboratory markers of myocardial necrosis.

Content module #10
The main symptoms and syndromes in diseases of the gastrointestinal tract

Topic 31. Symptoms and syndromes in chronic gastritis, peptic ulcer disease of the stomach and duodenum. Stomach cancer.

Definition and modern classification of gastritis and peptic ulcer of the stomach and duodenum. The main etiological factors of these diseases. Prevalence of helicobacteriosis, conditions of damage to the mucous membrane of the stomach and duodenum. The main complaints of patients with chronic gastritis and peptic ulcer. Peculiarities of the pain syndrome depending on the localization of the pathological focus and the state of the acid-producing function of the stomach. Manifestations of dyspeptic syndrome in chronic gastritis and peptic ulcer of the stomach and duodenum. Possibilities of instrumental and laboratory examination of patients. The main complications of peptic ulcer of the stomach and duodenum. Gastric bleeding syndrome.

Topic 32. Symptoms and syndromes in chronic hepatitis and liver cirrhosis.

The main complaints of patients with cholecystitis and cholangitis. Data of physical examination of patients with chronic cholecystitis and cholangitis. Definition and principles of modern classification of chronic hepatitis and liver cirrhosis. The main etiological factors of the development of hepatitis and liver cirrhosis. The mechanism of liver damage in hepatitis of viral etiology. The main complaints of patients with hepatitis and liver cirrhosis, features of examination results and physical examination data. Morphological and biochemical signs of liver damage. The main complications of liver cirrhosis.

Content module No. 11
The main symptoms and syndromes in kidney diseases

Topic 33. Main symptoms and syndromes in kidney diseases - acute and chronic glomerulonephritis.

Definition and modern classification of glomerulonephritis. The main mechanisms of development of glomerulonephritis. Complaints of patients with kidney damage and results of physical examination of patients with glomerulonephritis. Edema syndrome and arterial hypertension syndrome in kidney diseases. Possibilities of instrumental diagnosis of kidney pathology. Laboratory examination of urine, analysis and interpretation of results general clinical urine analysis, urine research according to Nechiporenko, Ambyurge, Adis-Kakovsky, Zimnytskyi. Urinary, nephrotic syndromes in kidney diseases. The results of a biochemical study of blood in kidney pathology. Renal failure and renal colic syndromes. Definition and classification of chronic kidney disease.

Topic 34. Main symptoms and syndromes in kidney diseases - acute and chronic pyelonephritis.

Definition and modern classification of pyelonephritis. The main mechanisms of development of pyelonephritis. Complaints of patients with kidney damage and results of physical examination of patients with pyelonephritis. Edema syndrome and arterial hypertension syndrome in kidney diseases. Systemic inflammation syndrome. Possibilities of instrumental diagnosis of kidney pathology. Laboratory examination of urine, analysis and interpretation of the results of general clinical analysis of urine, examination of urine according to Nechiporenko, Ambyurzhe, Adis-Kakovsky, Zimnytskyi. Urinary, nephrotic syndromes in kidney diseases. The results of a biochemical study of blood in kidney pathology. Renal failure and renal colic syndromes. Definition and classification of chronic kidney disease.

Content module No. 12
The main symptoms and syndromes in diseases of hematopoietic organs

Topic 35. Main symptoms and syndromes in anemia.

Definition and modern classification of anemias. Basic laboratory criteria of anemia. The mechanism of iron deficiency in the body and the occurrence of iron deficiency anemia. Main clinical manifestations of sideropenic and general hypoxic syndromes in iron deficiency anemia. Laboratory criteria of iron deficiency anemia. Causes and pathogenesis of V_{12}- folic acid deficiency anemia. Manifestations anemic syndrome, syndromes of damage to the digestive organs, funicular myelosis and peripheral blood damage in V_{12}- folic acid deficiency anemia. The main laboratory signs of V_{12}- folic acid deficiency anemia. Congenital and acquired hemolytic anemias: manifestations of general anemia, jaundice syndromes, splenomegaly and hemosiderosis of internal organs. Basic laboratory criteria of hemolytic anemias and features of bilirubin metabolism disorders. Analysis and interpretation general clinical blood test.

Topic 36. Symptoms and syndromes in leukemias and hemoblastoses.

Definition of leukemia and hemoblastosis. Modern classification. Etiology. Pathogenesis. Clonal theory of hemoblastosis. Clinical manifestations according to subjective and objective examination data. Main syndromes: leukemic proliferation syndrome, anemic, hemorrhagic, cytopenic syndromes in hemoblastosis. Clinical interpretation of general blood analysis in hemoblastosis. Clinical significance of bone marrow punctate examination. The value of genetic research. Acute myeloblastic and lymphoblastic leukemia, chronic myeloblastic and lymphoblastic leukemia. Definition of hematosarcoma (lymphoma). Lymphogranulomatosis.

Topic 37. Symptoms and syndromes in hemorrhagic diatheses.

The main components of the blood coagulation system. Developmental factors of bleeding and causes of hemorrhagic syndromes - thrombocytopenia, coagulopathy, hemorrhagic vasculitis. Characteristics of the hemorrhagic syndrome in hemophilia, thrombocytopenic purpura and Schönlein-Henoch disease. Manifestations of articular, abdominal, renal and anemic syndromes in these diseases. Basic methods of laboratory diagnosis of hemorrhagic syndromes.

Content module No. 13
The main symptoms and syndromes in diseases of the endocrine system

Topic 38. Symptoms and syndromes in hypothyroidism, thyrotoxicosis, diabetes Syndromes. Data analysis of instrumental research methods.
The main etiological factors of thyroid gland damage. Hyperthyroid and hypothyroid syndromes in diseases of the thyroid gland. Diffuse toxic goiter. The main complaints of the patient, the results of physical, instrumental and laboratory examination. Concept of thyrotoxic crisis. The main clinical manifestations of myxedema, the concept of hypothyroid coma.

Topic 39. Symptoms and syndromes in diabetes.
Definition and modern classification of diabetes. The main risk factors and mechanisms of the development of type 1 and type 2 diabetes. Complaints, features of examination of patients and data of physical examination in type 1 and type 2 diabetes. Modern laboratory diagnosis of diabetes mellitus, diagnostic value of the content of glycosylated hemoglobin and immunoreactive insulin. The most frequent comatose states in diabetes (hyperketonemic, hypoglycemic coma), mechanism of development, clinical manifestations, first aid.

Topic 40. Differential calculation.

4. The structure of the academic discipline

Names of topics	Number of hours					
	That's all	including				
		lectures	seminars	practical	laboratory	SR WITH
1. Tasks of the department of propaedeutics of internal diseases. Patient examination plan. Scheme of medical history. Questioning the patient. General examination of the patient, individual parts of the body. The diagnostic value of the symptoms detected during the examination of the patient.	6	2	0	2	0	2
2. Complaints of patients with respiratory diseases. Examination of	5	1	0	2	0	2

the chest. Palpation of the chest.						
3. Lung percussion. Methodology and technique of conducting comparative lung percussion.	4	1	0	2	0	1
4. Lung percussion. Methodology and technique of conducting topographic percussion of the lungs.	3	0	0	2	0	1
5. Auscultation of the lungs: basic respiratory sounds (vesicular and bronchial breathing).	3	0	0	2	0	1
6. Auscultation of the lungs: pathological and secondary respiratory sounds.	3	0	0	2	0	1
7. Questioning and general examination of patients with pathology of the cardiovascular system. Treatment of patients. Examination of the pulse and measurement of blood pressure.	5	1	0	2	0	2
8. Inspection and palpation and percussion of the atrial area and large vessels.	4	1	0	2	0	1
9. Auscultation of the heart: the main heart sounds and their changes. Additional heart tones.	3	0	0	2	0	1
10. Auscultation of the heart: organic and functional heart sounds.	3	0	0	2	0	1
11. Registration method and ECG analysis. ECG signs of ventricular and atrial hypertrophy.	4	0	0	2	0	2

12. ECG signs of violations of automaticity and excitability.	3	0	0	2	0	1
13. ECG signs of conduction disorders. Basics of electroimpulse therapy.	3	0	0	2	0	1
14. Questioning and examination of patients with diseases of the digestive organs. Examination and superficial palpation of the abdomen.	5	2	0	2	0	1
15. Deep sliding methodical palpation of the abdomen.	3	0	0	2	0	1
16. Examination of patients with diseases of the liver and biliary tract. Review. Percussion. Palpation of the liver and spleen, determination of their sizes by the Kurlov method.	5	2	0	2	0	1
17. Differential diagnosis of jaundice.	3	0	0	2	0	1
18. Liver failure syndrome. Portal hypertension. Hepatolienal syndrome.	3	0	0	2	0	1
19. Examination of patients with diseases of the kidneys and urinary tract. Questioning Inspection, percussion, palpation. Laboratory, instrumental, X-ray, morphological examination of kidneys.	5	2	0	2	0	1
20. Research of urine. Methods of urine research: general analysis of urine, test of Zimnytskyi,	3	0	0	2	0	1

Ambyurzhe, Nechyporenko, etc.						
21. Examination of patients with blood diseases. Questioning Review. Palpation. Percussion.	5	2	0	2	0	1
22. Blood test. Clinical interpretation of blood analysis.	3	0	0	2	0	1
23. Pneumonia: Symptoms and syndromes. Clinical-instrumental and laboratory research methods. Respiratory failure syndrome in the pathology of the bronchopulmonary system.	4	1	0	2	0	1
24. Symptoms and syndromes in chronic obstructive pulmonary disease, bronchial asthma, bronchitis, pulmonary emphysema. Data analysis of instrumental research methods. The concept of impaired function of external breathing. Spirography	4	1	0	2	0	1
25. Symptoms and syndromes in dry and exudative pleurisy.	3	0	0	2	0	1
26. Symptoms and syndromes of lung abscess, gangrene, bronchiectasis. Lung cancer.	3	0	0	2	0	1
27. Symptoms and syndromes in aortic heart defects.	4	1	0	2	0	1
28. Symptoms and syndromes with mitral heart defects.	4	1	0	2	0	1

29. Symptoms and syndromes in hypertension and secondary arterial hypertension. Hypertensive crises.	4	1	0	2	0	1
30. Ischemic heart disease: symptoms and syndromes in angina pectoris and myocardial infarction.	4	1	0	2	0	1
31. Symptoms and syndromes in chronic gastritis, peptic ulcer disease of the stomach and duodenum. Stomach cancer.	3	0	0	2	0	1
32. Symptoms and syndromes in chronic hepatitis and liver cirrhosis.	3	0	0	2	0	1
33. Symptoms and syndromes in kidney diseases - acute and chronic glomerulonephritis.	4	0	0	2	0	2
34. Symptoms and syndromes in kidney diseases - acute and chronic pyelonephritis.	4	0	0	2	0	2
35. Symptoms and syndromes in anemia.	3	0	0	2	0	1
36. Symptoms and syndromes in leukemias and hemoblastoses.	3	0	0	2	0	1
37. Symptoms and syndromes in hemorrhagic diatheses.	3	0	0	2	0	1
38. Symptoms and syndromes in hypothyroidism, thyrotoxicosis. Data analysis of laboratory	5	0	0	2	0	3

and instrumental research methods.						
39. Symptoms and syndromes in diabetes.	4	0	0	2	0	2
40. Differential settlement.	4	0	0	2	0	2
Together	6	2	0	2	0	2
Individual tasks	0	0	0	0	0	0
Only hours	150	20	0	80	0	50

5. Topics of lectures / seminars / practical / laboratory classes

5.1. Topics of lectures

№	Topic name	How many hours?
1.	Propaedeutics of internal medicine as an introduction to the clinic of internal diseases. Basic methods of examination of patients. Scheme of medical history.	2
2.	Symptoms and syndromes in respiratory diseases based on subjective and objective research methods.	2
3.	Symptoms and syndromes in diseases of the circulatory system based on subjective and objective research methods. Properties of pulse and blood pressure.	2
4.	Symptoms and syndromes in diseases of the gastrointestinal tract based on subjective and objective research methods. Palpation and percussion of the abdomen. Symptoms and syndromes in patients with pathology of the liver and biliary tract. Portal hypertension syndrome.	2
5.	Symptoms and syndromes in kidney diseases based on subjective and objective research methods. Urine examination. Symptomatology of acute and chronic glomerulonephritis and pyelonephritis.	2
6.	Symptoms and syndromes in diseases of the hematopoietic system based on subjective and objective research methods. General blood test. Symptomatology and diagnosis of anemia, leukemia. Hemorrhagic syndrome (hemorrhagic diatheses).	2
7.	Symptoms and syndromes in diseases of the endocrine system based on subjective and objective research methods. Diabetes. Diffuse toxic goiter.	2
8.	Symptoms and syndromes of pneumonia, bronchial asthma, pleurisy.	2
9.	Symptoms and syndromes in acquired heart defects (mitral and aortic).	2

10.	Symptoms and syndromes in ischemic heart disease: angina pectoris, myocardial infarction. Hypertensive disease and symptomatic hypertension. Classification. Cardiac and vascular failure syndrome.	2
	Together	**20**

5.2. Topics of seminar classes
Seminar classes are not provided.

5.3. Topics of practical classes

№	**Topic name**	**How many hours?**
1.	Tasks of the department of propaedeutics of internal diseases. Patient examination plan. Scheme of medical history. Questioning the patient. General examination of the patient, individual parts of the body. The diagnostic value of the symptoms detected during the examination of the patient.	2
2.	Complaints of patients with respiratory diseases. Examination of the chest. Palpation of the chest.	2
3.	Lung percussion. Methodology and technique of conducting comparative lung percussion.	2
4.	Lung percussion. Methodology and technique of conducting topographic percussion of the lungs.	2
5.	Auscultation of the lungs: basic respiratory sounds (vesicular and bronchial breathing).	2
6.	Auscultation of the lungs: pathological and secondary respiratory sounds.	2
7.	Questioning and general examination of patients with pathology of the cardiovascular system. Treatment of patients. Examination of the pulse and measurement of blood pressure.	2
8.	Inspection and palpation and percussion of the atrial area and large vessels.	2
9.	Auscultation of the heart: the main heart sounds and their changes. Additional heart tones.	2
10.	Auscultation of the heart: organic and functional heart sounds.	2
11.	Methodology of registration and analysis of ECG. ECG signs of ventricular and atrial hypertrophy.	2
12.	ECG signs of violations of automaticity and excitability.	2
13.	ECG signs of conduction disorders. Basics of electroimpulse therapy.	2
14.	Questioning and examination of patients with diseases of the digestive organs. Examination and superficial palpation of the abdomen.	2

15.	Deep sliding methodical palpation of the abdomen.	2
16.	Examination of patients with diseases of the liver and biliary tract. Review. Percussion. Palpation of the liver and spleen, determination of their sizes by the Kurlov method.	2
17.	Differential diagnosis of jaundice.	2
18.	Liver failure syndrome. Portal hypertension. Hepatolienal syndrome.	2
19.	Examination of patients with diseases of the kidneys and urinary tract. Questioning Inspection, percussion, palpation. Laboratory, instrumental, X-ray, morphological examination of kidneys.	2
20.	Urine examination. Methods of urine research: general analysis of urine, test of Zimnytskyi, Ambyurzhe, Nechyporenko, etc.	2
21.	Examination of patients with blood diseases. Questioning Review. Palpation. Percussion.	2
22.	Blood test. Clinical interpretation of blood analysis.	2
23.	Pneumonia: Symptoms and syndromes. Clinical-instrumental and laboratory research methods. Respiratory failure syndrome in the pathology of the bronchopulmonary system.	2
24.	Symptoms and syndromes in chronic obstructive pulmonary disease, bronchial asthma, bronchitis, pulmonary emphysema. Data analysis of instrumental research methods. The concept of impaired function of external breathing. Spirography.	2
25.	Symptoms and syndromes in dry and exudative pleurisy.	2
26.	Symptoms and syndromes of lung abscess, gangrene, bronchiectasis. Lung cancer.	2
27.	Symptoms and syndromes in aortic heart defects.	2
28.	Symptoms and syndromes of mitral heart defects.	2
29.	Symptoms and syndromes in hypertension and secondary arterial hypertension. Hypertensive crises.	2
30.	Ischemic heart disease: symptoms and syndromes in angina pectoris and myocardial infarction.	2
31.	Symptoms and syndromes in chronic gastritis, peptic ulcer disease of the stomach and duodenum. Stomach cancer.	2
32.		2
33.	Symptoms and syndromes in kidney diseases - acute and chronic glomerulonephritis.	2
34.	Symptoms and syndromes in kidney diseases - acute and chronic pyelonephritis.	2

35.	Symptoms and syndromes in anemia.	2
36.	Symptoms and syndromes in leukemia and hemoblastosis.	2
37.	Symptoms and syndromes in hemorrhagic diatheses.	2
38.	Symptoms and syndromes in hypothyroidism, thyrotoxicosis. Data analysis of laboratory and instrumental research methods.	2
39.	Symptoms and syndromes of diabetes.	2
40.	Differential calculation.	2
	Together	**80**

5.4. Topics of laboratory classes
Laboratory classes are not provided**.**

6. Independent work of a student of higher education

№	Title of the topic / types of tasks	How many hours?
1.	Preparation for practical classes - theoretical and development of methods of physical examination of the patient: ● survey and general examination of the patient ● physical examination of respiratory organs ● physical examination of circulatory organs ● physical examination of digestive organs ● physical examination of the urinary and endocrine systems ● ECG analysis	 4 4 4 4 4 4
2.	Independent study of topics that are not part of the classroom lesson plan: ● instrumental methods of examination of respiratory organs ● electrocardiographic examination in combined heart rhythm disorders ● instrumental methods of cardiovascular system research ● instrumental and laboratory methods of research of the gastrointestinal tract ● heart failure syndrome: basic clinical and instrumental methods of examination. ● syndromes of remission of the function of the endocrine system	 4 4 4 4 4 4
3.	Preparation for differential assessment	2
	Together	**50**

7. Teaching methods

Practical classes: conversation, role-playing games, solving clinical situational problems, practicing the skills of questioning the patient, practicing the skills of physical examination of the patient, training and practicing skills on simulation dummies, training exercises on the diagnosis of the most common diseases of internal organs.

Independent work: independent work with recommended basic and additional literature, with electronic information resources, independent work with a bank of test tasks of the Step-2 type, independent practice of algorithms for communicating with a patient, independent practice of practical skills of physical examination of a patient.

8. Forms of control and assessment methods (including criteria for evaluating learning outcomes)

Current control: oral interview, evaluation of the performance of practical skills, level of theoretical knowledge, pass analysis of the obtained results of patient examination, assessment of communication skills during role play, solving situational clinical tasks, assessment of activity in class.

Evaluation of the current educational activity in a practical session:

1. Evaluation of theoretical knowledge on the subject of the lesson:
   - methods: survey, solving a situational clinical problem
   - maximum score – 5, minimum score – 3, unsatisfactory score – 2.
2. Evaluation of practical skills and manipulations on the subject of the lesson:
   - methods: assessment of the correctness of the performance of practical skills
   - maximum score – 5, minimum score – 3, unsatisfactory score – 2.
3. Evaluation of work with a patient on the subject of the lesson:
   - methods: assessment of: a) communication skills of communication with the patient, b) correctness of appointment and evaluation of laboratory and instrumental studies, c) substantiation of clinical diagnosis;
   - maximum score – 5, minimum score – 3, unsatisfactory score – 2.

The grade for one practical session is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Final control: differential calculation.

Current evaluation criteria in practical training

Rating	Evaluation criteria
«5»	The student of higher education is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills during the examination of a patient and the interpretation of clinical, laboratory and instrumental research data, expresses his opinion on the topic of the class, demonstrates clinical thinking.
«4»	The student of higher education has a good command of the material, participates in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
«3»	The student of higher education does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data with significant errors.
«2»	The student of higher education does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data.

Only those applicants who have fulfilled the requirements of the training program in the

discipline, have no academic debt and their average score for the current educational activity in the discipline is at least 3.00 are admitted to the final control in the form of a differentiated credit.

Evaluation of learning results during the final control

The content of the evaluated activity	Number of points
Solving a clinical problem with evaluation of laboratory and instrumental research.	1
Answers to theoretical questions.	2
Evaluation of radiographs, electrocardiograms, etc.	1
Practical task according to the OSKI type.	1

Criteria for evaluating the results of higher education applicants in the exam

Rating	Evaluation criteria
Perfectly	The student of higher education correctly, accurately and completely fulfilled all the tasks of the examination ticket, clearly and logically answered the questions posed by the examiners. Gthoroughly and comprehensively knows the content of theoretical issues, is fluent in professional and scientific terminology. Thinks logically and constructs an answer, freely uses acquired theoretical knowledge when analyzing practical tasks. When solving a clinical problem, he correctly interpreted the anamnesis data, the results of clinical, laboratory and instrumental studies, answered all the questions correctly and convincingly substantiated his point of view, could propose and justify an alternative version of the decision on individual issues. When solving a practical task according to the OSKI type, he correctly demonstrated the implementation of practical skills, strictly followed the algorithm of their implementation.
Okay	The student of higher education sufficiently completed all the tasks of the examination ticket, clearly and logically answered the questions posed by the examiners. He knows the content of theoretical issues deeply and comprehensively, and has professional and scientific terminology. Thinks logically and constructs an answer, uses acquired theoretical knowledge when analyzing practical tasks. But when teaching some questions, it lacks sufficient depth and argumentation, makes insignificant mistakes, which are eliminated by the student of higher education himself, when the examiner points them out. When solving a clinical problem, he assumed insignificant errors or inaccuracies in the interpretation of anamnesis data, the results of clinical, laboratory and instrumental studies, answered all the questions without significant errors, fully justified his point of view, but the proposal of an alternative option causes difficulties. When solving a practical task according to the OSKI type, he made minor mistakes in the algorithm and technique of performing skills, which were corrected at the instruction of the teacher.
Satisfactorily	The student of higher education incompletely fulfilled all the tasks of the examination ticket, the answers to additional and leading questions are vague and vague. Possesses a basic amount of theoretical knowledge, uses professional and scientific terminology inaccurately. Experiences significant difficulties in constructing an independent logical answer, in applying

	theoretical knowledge in the analysis of practical tasks. There are significant errors in the answers. When solving a clinical problem, he interpreted the anamnesis data, the results of clinical, laboratory and instrumental studies with errors, did not know individual details, made inaccuracies in the answers to questions, did not sufficiently justify his answers and interpret the wording correctly, experiences difficulties in completing tasks and proposing alternative options. When solving a practical task according to the OSKI type, significant errors were made in the algorithm and skill performance technique.
Unsatisfactorily	The student did not complete the task of the examination ticket, in most cases did not answer the additional and leading questions of the examiners. He did not master the basic amount of theoretical knowledge, he showed a low level of mastery of professional and scientific terminology. Answers to questions are fragmentary, inconsistent, illogical, cannot apply theoretical knowledge when analyzing practical tasks. There are a significant number of gross errors in the answers. When solving a clinical problem, he could not interpret the received data from the anamnesis, the results of clinical, laboratory and instrumental studies, answer the questions, or made significant mistakes in the answers; could not justify his decisions or did it unconvincingly. He did not offer alternative options. When solving a practical task according to the OSKI type, he did not demonstrate or make gross errors and mistakes in the algorithm and skill performance technique.

9. Distribution of points received by students of higher education

The obtained average score for the academic discipline for applicants who have successfully mastered the work program of the academic discipline is converted from a traditional four-point scale to points on a 200-point scale, as shown in the table:

Conversion table of a traditional assessment into a multi-point scale

Traditional four-point scale	Multipoint 200-point scale
Excellent ("5")	185 – 200
OK («4»)	151 – 184
Satisfactory ("3")	120 – 150
Unsatisfactory ("2")	Below 120

A multi-point scale (200-point scale) characterizes the actual success of each applicant in learning the educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is performed by the information and technical department of the University.

According to the obtained points on a 200-point scale, the achievements of the applicants are evaluated according to the ECTS rating scale. Further ranking according to the ECTS rating scale allows you to evaluate the achievements of students from the educational component who are studying in the same course of the same specialty, according to the points they received.

The ECTS scale is a relative-comparative rating, which establishes the applicant's belonging to the group of better or worse among the reference group of fellow students (faculty, specialty). An "A" grade on the ECTS scale cannot be equal to an "excellent" grade, a "B" grade to a "good" grade, etc. When converting from a multi-point scale, the limits of grades "A", "B", "C", "D", "E" according to the ECTS scale do not coincide with the limits of grades "5", "4", "3" according to the traditional scale. Acquirers who have received grades of "FX" and "F" ("2") are not included in the list of ranked acquirers. The grade "FX" is awarded to students who have

obtained the minimum number of points for the current learning activity, but who have not passed the final examination. A grade of "F" is assigned to students who have attended all classes in the discipline, but have not achieved a grade point average (3.00) for the current academic activity and are not admitted to the final examination.

Applicants who study on one course (one specialty), based on the number of points scored in the discipline, are ranked on the ECTS scale as follows:

Conversion of the traditional grade from the discipline and the sum of points on the ECTS scale

Evaluation on the ECTS scale	Statistical indicator
A	Top 10% achievers
IN	The next 25% of earners
S	The next 30% of earners
D	The next 25% of earners
Well	The next 10% of earners

10. Methodological support

- Working program of the academic discipline
- Syllabus
- Methodical developments for practical classes
- Methodical recommendations for independent work of higher education applicants
- Multimedia presentations
- Situational clinical tasks
- Scenarios of role-playing games (if necessary)
- Electronic bank of test tasks by subdivisions of the discipline

Educational and methodical literature:

1. Internal diseases: study guide / O. O. Yakymenko, V. V. Klochko, O. E. Kravchuk and others. ; under the editorship Prof. O. O. Yakymenko. — 2nd ed., corrected. and additional — Odesa: ONMedU, 2023. — 436 p.
2. Methods of objective examination in the clinic of internal diseases: training. manual / O.O. Yakymenko, O.E. Kravchuk, V.V. Klochko et al. – Odesa, ONMedU, 2013. – 154 p.
3. Electrocardiography : a manual / O. Yakymenko, S. Kolomiets, V. Smal et al. — Odessa: ONMedU, 2022. — 120 p.

11. Questions for preparing for the final inspection

1. Internal medicine propaedeutics as a scientific discipline, its goals and tasks. Scheme of medical history. Medical history.
2. Procedure for interviewing the patient. The main and additional complaints of the patient. The importance of history in the study of the patient. Scheme of medical history.
3. General examination of the patient. Assessment of the patient's general condition. Gradations of the severity of the condition, their clinical characteristics. Assessment of consciousness. Variants of impaired consciousness and their clinical signs, diagnostic significance.
4. General overview. Position of the patient in bed. Assessment criteria and clinical characteristics of constitutional types.
5. General examination of the patient. Assessments of consciousness. The face of a patient with pathology of internal organs: variants, and their clinical characteristics and diagnostic significance.
6. General overview. Evaluation criteria of skin and visible mucous membranes and subcutaneous fat

layer. Examination of the skin in normal conditions and in diseases of internal organs and their diagnostic value.

7. General overview. Examination of lymph nodes, sequence of palpation and characteristics of the properties of lymph nodes, diagnostic value of changes.
8. General overview. Methods of measuring body temperature, types of temperature curves and their diagnostic value in various diseases.
9. Complaints of patients with respiratory diseases: chest pain, cough, shortness of breath and suffocation - details of complaints, diagnostic significance.
10. Shortness of breath in diseases of the respiratory organs: definition of the concept, types, causes and mechanism of occurrence. Detailing and diagnostic value of shortness of breath in diseases of the respiratory organs. Definition of the concept of "suffocation", types, causes and mechanisms of occurrence.
11. Cough in diseases of the respiratory organs: definition of the concept of "cough", types, causes and mechanism of its occurrence. Detailing and diagnostic value of cough in respiratory diseases.
12. Hemoptysis in diseases of the respiratory organs and pulmonary bleeding: definition of concepts, causes and mechanisms of their occurrence. Detailing and diagnostic value of hemoptysis and pulmonary bleeding.
13. Data of a general examination of the chest, types of breathing. Pathological types of breathing, their diagnostic significance. Options for changing the shape of the chest.
14. Palpation of the chest - voice tremor: definition of the concept and mechanism of occurrence. Variations of vocal tremor in pathology and their diagnostic significance. The diagnostic value of increasing the general and local resistance of the chest in diseases of the respiratory organs.
15. Lung percussion. Name the types of percussion sound. Pulmonary percussion sound and its physical properties. Characteristics of the percussion sound over the lungs are normal.
16. Auscultation of the lungs. Basic respiratory noises: mechanism of occurrence, clinical characteristics in a healthy person, physiological variants. Changes in the main breath sounds in pathology.
17. Auscultation of the lungs. Side respiratory noises. Causes and mechanism of their occurrence, clinical characteristics. Diagnostic value. Differences of secondary respiratory noises from each other.
18. Physical and microscopic properties of sputum according to general sputum analysis and their diagnostic value. Properties of pleural fluid and their diagnostic value in respiratory diseases. Data of chemical and microscopic examination of pleural fluid and their diagnostic value.
19. Methods of studying the function of external breathing and their diagnostic possibilities. Spirometry. Types of breathing disorders according to spirography data.
20. Pulmonary tissue compaction syndrome. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.
21. Syndrome of bronchial obstruction of the lungs. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.
22. Syndrome of fluid accumulation in the pleural cavity. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.
23. Syndrome of accumulation of air in the pleural cavity. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.
24. Syndrome of the presence of a cavity in the lungs. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.
25. Syndrome of increased airiness of the lungs. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence.

Additional research methods.

26. Respiratory failure syndrome: definition of the concept, types, causes and mechanisms of occurrence. Types of ventilation disorders, causes of their occurrence.
27. Croupous pneumonia: etiology, classification, results of clinical examination, main syndromes, complications and principles of treatment.
28. Bronchopneumonia: etiology, classification, results of clinical examination, main syndromes, complications and principles of treatment.
29. Acute and chronic bronchitis (COPD): etiology, classification, clinical data, main syndromes, complications, principles of treatment.
30. Pleurisy: etiology, results of clinical examination, main syndromes, complications, principles of treatment.
31. Purulent lung diseases (lung abscess, bronchiectasis): etiology, clinical examination results, complications, treatment principles.
32. The main complaints in diseases of the circulatory system and their diagnostic value.
33. Coponogenic and non-coponogenic pains in the area of the heart: causes and mechanism of their occurrence, details and their diagnostic significance. Differences between coronary and non-coronary pains.
34. Shortness of breath in diseases of the cardiovascular system: definition of the concept of "shortness of breath", causes and mechanism of shortness of breath. Suffocation attack.
35. Data of a general review and review by region for diseases of the cardiovascular system. Overview of the precardial region. Diagnostic value.
36. Heart palpation. The main characteristics of apical and cardiac impulses. The diagnostic value of palpation of the heart, the "cat's purring symptom."
37. Causes and diagnostic value of displacement and expansion of the right border of relative cardiac dullness. Diagnostic value of displacement and expansion of the left border of relative cardiac dullness. Causes and diagnostic value of vascular bundle expansion.
38. The mechanism of formation of the first tone. Causes of strengthening and weakening of the first tone of the heart in normal and pathological conditions. The mechanism of formation of the II tone. Definition of the concept of accent II tone and its weakening in normal and pathological conditions. The concept of bifurcation and splitting of the II tone. Cancel I tone and II tone.
39. Pathological heart tones. Mechanism of formation of III and IV tones, mitral valve opening tone.
40. Classification of noises heard during auscultation of the heart and blood vessels, the mechanism of their occurrence. Differences between organic and functional noises.
41. Pulse properties. Characteristics of pulse properties in a healthy person. Changes in pulse properties in pathology and their diagnostic significance.
42. Blood pressure measurement methods, BOO3 standards. Concept of mild, moderate, severe, systolic arterial hypertension and definition of hypotension.
43. Methods of laboratory and instrumental diagnosis of diseases of the cardiovascular system, and their diagnostic possibilities.Methodology and technique of electrocardiogram registration. ECG signs of hypertrophy of the heart. Read the ECG with hypertrophy of the chambers of the heart.
44. Clinical and electrocardiographic diagnosis of atrial fibrillation and atrial flutter. Read the ECG with atrial fibrillation and flutter.
45. Clinical and electrocardiographic diagnosis of supraventricular and ventricular extrasystole. Read the ECG with extrasystole.
46. Clinical and electrocardiographic diagnosis of heart blocks. Read the ECG with post-expiratory and longitudinal heart blocks.
47. Electrocardiographic diagnosis of myocardial infarction. Read the ECG with MI.
48. Mitral stenosis: causes, mechanisms of hemodynamic compensation and decompensation; main complaints, the mechanism of their occurrence, clinical characteristics, diagnostic methods.
49. Mitral valve insufficiency: causes, mechanisms of hemodynamic compensation and decompensation; main complaints, the mechanism of their occurrence, clinical characteristics, diagnostic methods.

50. Aortic valve stenosis: causes, mechanisms of hemodynamic compensation and decompensation; main complaints, the mechanism of their occurrence, clinical characteristics, diagnostic methods.
51. Aortic valve insufficiency: causes, mechanisms of hemodynamic compensation and decompensation; main complaints, the mechanism of their occurrence, clinical characteristics, diagnostic methods.
52. Arterial hypertension syndrome: causes and mechanism of development; complaints of patients, results of clinical examination of patients. Complication.
53. Hypertensive disease and symptomatic arterial hypertension. Clinical picture. Classification. Laboratory and instrumental methods of diagnosis. Principles of treatment.
54. CHD: syndrome of acute and chronic coronary insufficiency: definition. Main complaints and examination results of patients with angina pectoris. Instrumental and laboratory methods of diagnosis in angina pectoris syndrome. Principles of treatment.
55. CHD: myocardial infarction. Clinical picture. Classification. Diagnostic methods. Principles of treatment.
56. Chronic heart failure syndrome. Definition, clinical picture, classification by stages and functional classes, diagnostic methods. Principles of treatment.
57. The main complaints of patients with diseases of the gastrointestinal tract, their characteristics and semiological significance. Examination data of patients with pathology of the gastrointestinal tract and their semiological significance. Examination of the oral cavity, abdomen, their clinical significance.
58. Abdominal palpation. Objectives and tasks during superficial and deep palpation of the abdomen. Division of the abdomen into anatomical regions.
59. Fractional study of the secretory activity of the stomach with a thin probe, method of conducting. Kay's test (histamine test) - interpretation of results.
60. Methodology and goals of performing duodenal sounding. Study of duodenal contents.
61. Acute and chronic gastritis: classification, main symptoms and syndromes, clinical, laboratory and instrumental methods of diagnosis.
62. The main syndromes and symptoms of peptic ulcer disease of the stomach and duodenum. Diagnostic methods. Complication.
63. The main symptoms and syndromes in diseases of the liver and biliary tract. Hepatitis. Clinical picture, main syndromes. Diagnostic methods.
64. Jaundice syndrome, pathogenetic classification, detection methods. Laboratory diagnostics. Differential diagnosis of jaundice.
65. Portal hypertension syndrome. Cirrhosis. Clinical, laboratory and instrumental methods of diagnosis.
66. The main complaints of patients with urinary diseases, the mechanism of their development and semiological significance.
67. Characteristic signs during the examination of patients with pathology of the urinary system. Results of palpation and percussion of the kidneys. Edema syndrome in kidney disease. Mechanism of occurrence, features of renal and cardiac edema.
68. Mechanism of development of arterial hypertension syndrome in kidney diseases. Peculiarities of blood pressure profile in kidney pathology. Complication of renal arterial hypertension.
69. Urinary syndrome in kidney disease. Clinical and laboratory signs of urinary syndrome.
70. Nephrotic syndrome in kidney pathology. Causes, symptomatology and clinical and laboratory diagnostics.
71. Syndrome of chronic renal failure. Etiology, clinical signs. Diagnosis of CKD syndrome.
72. Chronic glomerulonephritis: etiology, symptomatology, laboratory data, principles of treatment.
73. Chronic pyelonephritis: etiology, symptomatology, laboratory data, principles of treatment.
74. Typical complaints and physical examination data in diseases of hematopoietic organs. Palpation and percussion of the spleen. Anemia syndrome. Clinical and laboratory signs of anemia. Iron deficiency anemia. Clinical picture. Principles of treatment.
75. Hemorrhagic syndrome. Types of bleeding. Laboratory diagnosis of hemorrhagic diathesis.

76. Hemoblastosis. Definition of the concept. Clinical picture. Main syndromes. Changes in blood analysis in hemoblastosis (chronic myelo- and lymphocytic leukemia).
77. Diabetes mellitus: etiology, symptomatology, classification of diabetes mellitus, data of additional studies. Complications of diabetes and principles of treatment. Types of coma in diabetes. Diagnosis of hyper- and hypoglycemic coma. Treatment.
78. Diseases of the thyroid gland - hyperthyroidism and hypothyroidism: etiology, clinical picture, diagnosis, complications, principles of treatment.

List of practical skills:

1. Decoding the ECG. Interpretation of found changes.
2. Evaluate clinical blood analysis.
3. Evaluate the clinical urinalysis.
4. Evaluate the clinical analysis of sputum.
5. Methodology of examination and palpation of the chest.
6. Methodology of comparative lung percussion.
7. Methodology of topographic percussion of the lungs.
8. Determination of the excursion of the lower edge of the lungs
9. Lung auscultation technique.
10. Techniques for performing bronchophonia of the lungs
11. Technique of palpation of the precardial region.
12. Methodology for assessment of apical shock
13. The method of assessment of cardiac impulse
14. Technique of heart percussion. Determination of the limits of relative dullness of the heart.
15. Technique of heart percussion. Determination of the limits of absolute dullness of the heart.
16. Technique of heart percussion. Determination of the boundaries of the vascular bundle
17. Method of auscultation of the heart.
18. Arterial pulse research methodology. Pulse properties.
19. Blood pressure measurement technique.
20. Technique of superficial abdominal palpation.
21. Technique of deep abdominal palpation.
22. The method of determining the lower border of the stomach.
23. Methodology for determining liver boundaries according to Kurlov.
24. Liver palpation technique.
25. Kidney palpation technique.
26. Percussion of the kidneys is a symptom of parsnip and its diagnostic value
27. Determining the size of the spleen by percussion method
28. Method of palpation of the spleen.
29. Methods of palpation of lymph nodes, determination of edema.
30. Method of palpation of the thyroid gland.

12. Recommended reading

1. Propedeutics of internal medicine : Part 1. Diagnostics : textbook for English learning Students of higher medical schools / O.M. Kovalyova, T.V. Ashcheulova — 4th ed. — Vinnytsia : Nova Knyha, 2019. — 7-15 p.
2. Propaedeutics of internal medicine. Collection of clinical lectures: the educational and visual guide: in two parts. Part 1. – Dnipro: Gerda, 2019. – 14-36 p.
3. Propaedeutics of Internal Medicine: Workbook. Clinical manual / V.Ye. Kondratiuk, V.A. Khomaziuk, I.V. Krasiuk, T.H. Ostashevska, O.A. Bychkov. — Kyiv : AUS Medicine Publishing, 2018. — 15-21 p.
4. Propedeutics of Internal Medicine : Part 2. Syndromes and diseases: textbook for English learning Students of higher medical schools/ O.M.Kovalyova, S.O.Shapovalova, O.O.Nizhegorodtseva. — Ed.3. — Vinnytsia : Nova Knyha, 2017. — 8-24 p.
5. Patient Care (Practical Course): textbook / O.M. Kovalyova, V.M. Lisovyi, R.S. Shevchenko et al. – 2nd edition. – Medicine, 2018. – 320p
6. Ashcheulova T. Practicum. Care of the patient in therapy department : Manual for 2 year students / T. Ashcheulova, O. Kovalyova, G. Demydenko. – Kharkiv : KhNMU, 2017. –35 p.
7. Kovalyova O. Practicum. Nurse practice in therapy department : manual for 3 year students / O. Kovalyova, T. Ashcheulova, G. Demydenko. – Kharkiv National Medical University. – Kharkiv, 2017. –32 p.
8. Harrison's manual of medicine. 20th edition. Author: Dennis L. Kasper, Anthony S. Fauci, Stephen L. Hauser, Dan L. Longo, J. Larry Jameson, Joseph Loscalzo. McGraw Hill / Medical , November 5, 2019, 1264 p.

Additional:

9. Vasiuk V., Shubravsky A., Splavsky O. Methods of patient clinical examination. – Chernovtsy: Misto, 2006. – 134 p.
10. Kovalyova o., Shapovalova S. Diagnostics of the blood diseases. – Kharkiv, 2005. – 100 p.
11. Demchuk A.V., Konstantinovich T.V. Guide to case report writing, history taking and physical examination. – Vinnytsia, 2010. – 96 p.
12. Bates' guide to physical examination and history taking / Lynn S. Bickley, Peter G. Szilagyi ; guest editor, Richard M. Hoffman. – Twelfth edition. – Philadelphia : Wolters Kluwer, 2017. – 1066p.
13. Macleod's Clinical Examination /Graham Douglas, Fiona Nikol, Colin Robertson. – Thirteenth edition. – Elsevier: Churchill Livingstone, 2013. – 471p.
14.

Main:

1.Propaedeutics of Internal Medicine: Textbook / Y.I. Decik, O.G. Yavorsky, E.M. Neyko et al. eds. 6th ed. + 12 p. color.

2. Methods of objective examination in the clinic of internal diseases: a textbook / O.O. Yakymenko, O.E. Kravchuk, V.V. Klochko et al.

3.Methods of diagnostics in the clinic of internal medicine: a textbook / A.S. Svintsitsky. - K.: VSV "Medicine", 2019. - 1008 p. + 80 p. color.

Additional:

1. Methods of examination of a therapeutic patient: a textbook / S.M.Andreychyn, N.A.Bilkevych, T.Y.Chernets - Ternopil: TSMU, 2016. 260 p.

2.Questioning and physical examination of a therapeutic patient: Study guide for students of III-IV courses of medical universities / V.E. Neyko, I.V. Tymkiv, M.V. Blyznyuk [et al: IFNMU, 2016. - 142 p.

3. Epishyn A.V. Propedeutics of internal diseases with care for therapeutic patients / A.V. Epishyn // K. - 2015. 768c.

4.Kovaleva OM. Propedeutics of internal medicine / OM. Kovaleva, NA Safargalina-Kornilova // K.: Medicine 2010 - 750 p.

5.Macleod's Clinical Examination / Ed. G.Douglas, F.Nicol, C.Robertson.- 13th ed.- Elsevier. 2013. - 471 p.

6. Bates' Guide to Physical Examination and History Taking / Ed. Lynn S. Bickley, Peter G. Szilagyi. - Wolters Kluwer, 2017. - 1066 p.

13. Electronic information resources

1. http://moz.gov.ua - Ministry of Health of Ukraine
2. www.ama-assn.org - American Medical Association
3. www.who.int - World Health Organization
4. www.dec.gov.ua/mtd/home/ - State Expert Center of the Ministry of Health of Ukraine
5. http://bma.org.uk - British Medical Association
6. www.gmc-uk.org - *General Medical Council* (*GMC*)
7. www.bundesaerztekammer.de - German Medical Association
8. https://onmedu.edu.ua/ - website of Odesa National Medical University
9. https://onmedu.edu.ua/kafedra/propedevtiki-vnutrishnih-hvorob-ta-terapii/ - Information page of the Department of Propedeutics of Internal Medicine and Therapy of ONMedU