

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
Petro Mohyla Black Sea National University
Medical Institute
Department of Therapeutic and Surgical Disciplines

"APPROVE "
The first vice-rector
Grishchenko NM

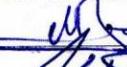
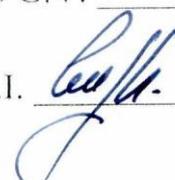
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CURRICULUM WORK PROGRAM

PROPEDEUTICS OF INTERNAL MEDICINE

Area of knowledge 22 "Health care"
Specialty 222 "Medicine"

Developer
Head of the Department of Developer
Guarantor of the educational program
Director of the institute
Head of educational and methodical
department

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Description of the discipline

Characteristic	Characteristics of the discipline	
Name of discipline	Propaedeutics of internal medicine	
Branch of knowledge	22 "Health care"	
Specialty	222 "Medicine"	
Specialization (if any)		
Educational program	Medicine	
Level of higher education	Master	
Discipline status	Normative	
Curriculum	3rd	
Academic year	2021-2022	
Semester numbers:	Full-time	Correspondence form
	5th - 6th	
Total number of ECTS credits / hours	4.5 credits (2.0 / 2.5) / 135 hours	
Course structure: - lectures - practical classes - hours of independent work of students	Full-time	Correspondence form
	18.0 (8/10)	
	55 (15/40) 63 (38/25)	
Percentage of classroom load	54%	
Language of instruction		
Form of intermediate control (if any)	Certification for the 5th semester	
Form of final control	Exam - 6th semester	

2. Purpose, tasks and planned learning outcomes

The purpose of teaching / studying the discipline "Propaedeutics of Internal Medicine" is for students to master the methods and techniques of clinical examination of the patient, the peculiarities of professional communication between doctor and patient, subjective and objective manifestations of diseases (symptoms and syndromes), causes and mechanisms of their origin and development (semiology) in order to diagnose.

Objectives of study: acquisition by the student of competences, knowledge, abilities and skills for implementation of professional activity on a specialty with:

- 1) mastering the basic principles of examination of the patient according to the traditions of the domestic therapeutic school;
- 2) methodically correct questioning and examination of patients with pathology of internal organs;
- 3) interpretation of the relationship of the patient's complaints and the implementation of a preliminary assessment of the affected body system;
- 4) generalization of the results of questioning and examination of patients and distinguishing on their basis the main symptoms and syndromes;
- 5) analysis of the results of laboratory and instrumental studies of the affected systems;
- 6) generalization of the results of examination of the affected systems and identification of the main symptoms and syndromes of its defeat to make a correct diagnosis.

Prerequisite is the study of the discipline (interdisciplinary connections). Propaedeutics of internal medicine as a discipline:

- a) is based on students' understanding of the basic principles and knowledge of anatomy, histology, medical and biological physics, medical, biological and bioorganic chemistry, biology, normal physiology, microbiology and integrates with these disciplines;
- b) creates a basis for students to master clinical disciplines (internal medicine, endocrinology, medical genetics, clinical pharmacology, clinical immunology and allergology, occupational diseases, neurology, etc.), which involves both the integration of teaching with basic clinical disciplines and the acquisition of in-depth knowledge of therapy, the ability to use this knowledge in the process of further training and in the professional activity of a doctor;
- c) forms the therapeutic basis of clinical thinking;
- d) provides the possibility of therapeutic analysis of clinical situations with for the purpose of further diagnosis, treatment, prevention of diseases.

Expected learning outcomes. As a result of studying the discipline, students have:

- Master the theoretical knowledge needed to detect human diseases.
- Master the practical techniques and methods of physical and laboratory examination of patients.
- Master general methodological approaches to clinical examination of the patient.

- Diagnose certain internal human diseases with their typical manifestations .
- Demonstrate moral, ethical and deontological qualities in professional communication with the patient.

According to the requirements of the educational and professional program, students must:

- **KNOW :**

- Basic rules of questioning and examination of the patient.
- Physical and instrumental methods for studying the state of the broncho-pulmonary system.
- Physical methods of research of cardiovascular system.
- Instrumental methods of research of cardiovascular system.
- The main methods of research of the organs of the gastrointestinal tract and excretory system.
- The main symptoms and syndromes in diseases of the cardiovascular system.
- The main symptoms and syndromes of respiratory diseases.
- The main symptoms and syndromes in diseases of the gastrointestinal tract and excretory system.
- Endocrine diseases, pathology of the blood system and interpretation of the results of laboratory methods of examination;

- **BE ABLE TO:**

- solve situational problems with the definition of causal factors, risk factors, the main link of pathogenesis, stages of development, mechanisms of development of clinical manifestations, options for completion, with typical pathological processes and the most common diseases;
- schematically reflect the mechanisms of pathogenesis and clinical manifestations of diseases;

- analyze and interpret the results of blood, urine, lipidograms, electrocardiograms, spiograms, immunograms, hormonal background;

- identify regenerative, degenerative, and forms of pathological regeneration of "red" and "white" blood cells in peripheral blood smears; interpret their presence or absence in the blood;

- on the basis of the results of laboratory and instrumental research to assess the state of functioning of organs and systems of the body in diseases;

- to analyze different options for the development of causal relationships in the pathogenesis of diseases;
- be able to identify and record the leading clinical syndrome, its main link and clinical signs;

- make an informed decision for the appointment of laboratory and / or instrumental examination;

- **MOTHER OF COMPETENCE:**

- on the application of knowledge on propaedeutics of internal medicine for the diagnosis of diseases of internal organs, the promotion of a healthy lifestyle, as well as for the prevention of the occurrence and development of diseases;

- about the main perspective research methods in internal medicine for early diagnosis of the most common conditions.

The developed program corresponds to the *educational-professional program (EPP)* and is focused on the formation of *competencies*:

general (GC) - GC 1-GC3 EPP:

GC1. Ability to abstract thinking, analysis and synthesis, the ability to learn and master modern knowledge.

GC2. Ability to apply knowledge in practical situations.

GC3. Knowledge and understanding of the subject area and understanding

professional (PC) - PC1-PC6, PC 11, PC 20 OEPP:

- PC 1. Patient interviewing skills.
- PC 2. Ability to determine the required list of laboratory and instrumental studies and evaluate their results.
- PC 3. Ability to establish a preliminary and clinical diagnosis of the disease. - FC 4. Ability to determine the required mode of work and rest in the treatment of diseases.
- PC 5. Ability to determine the nature of nutrition in the treatment of diseases.
- PC 6. Ability to determine the principles and nature of treatment of diseases.
- PC11. Skills to perform medical manipulations.
- PC20. Ability to assess the impact of the environment, socio-economic and biological determinants on the health of the individual, family, population.

According to the educational-professional program, the expected *program learning outcomes (PLO)* include skills ***PLO11, PLO13-PLO18, PLO 22, PLO 25, PLO 2 8, PLO30, PLO 32, PLO33, PLO 35, PLO 41: EPP :***

- **11** : Collect data on patient complaints, medical history, life history (including occupational history), in a health care facility, its unit or at the patient's home, using the results of a half-interview with the patient, according to the standard scheme of the patient . Under any circumstances (in a health care facility, its unit, at the patient's home, etc.), using knowledge about the person, his organs and systems, according to certain algorithms:
 - collect inform atsiyu about the general condition of the patient (consciousness constitution) and the external appearance (examination of the skin, subcutaneous fat layer, palpation of lymph nodes, thyroid and mammary glands); assess the psychomotor and physical development of the child;
 - OBST ezhuvaty cardiovascular system (inspection and palpation of the surface area of the heart and blood vessels, determining the limits of percussion of the heart and blood vessels, auscultation of the heart and blood vessels);
 - examine the condition of the respiratory organs (examination of the chest and upper respiratory tract , palpation of the chest, percussion and auscultation of the lungs);
 - examine the condition of the abdominal organs (examination of the abdomen, palpation and percussion of the intestines, stomach, liver, spleen, palpation of the pancreas, kidneys, pelvic organs, finger examination of the rectum);
 - examine the condition of the musculoskeletal system (examination and palpation);
 - examine the state of the nervous system;
 - examine the condition of the genitourinary system;
 - assess the state of fetal development fetus for data calculation and auscultation of fetal weight his heart.

- **13.** In the conditions of a health care institution, its subdivision and among the attached population:

Be able to identify and record the leading clinical symptom or syndrome (according to list 1) by making an informed decision, using previous patient history, physical examination of the patient, knowledge of the person, his organs and systems and adhering to relevant ethical and legal norms.

Be able to establish the most probable or syndromic diagnosis of the disease (according to list 2) by making an informed decision, by comparing with standards, using previous history and examination of the patient, based on the leading clinical symptom or syndrome, using knowledge about the person, his organs and system, adhering to the relevant ethical and legal norms.

- **14.** In the conditions of a health care institution, its subdivision:

- Assign a laboratory and / or instrumental examination of the patient (according to list 4) by making an informed decision, based on the most probable or syndromic diagnosis, according to standard schemes, using knowledge of the person, his organs and systems, adhering to relevant ethical and legal norms.
- Carry out differential diagnosis of diseases (according to list 2) by making an informed decision, according to a certain algorithm, using the most probable or syndromic diagnosis, data of laboratory and instrumental examination of the patient, knowledge of the person, his organs and systems, adhering to ethical and legal norms.
- Establish a preliminary clinical diagnosis with (according to list 2) by making an informed decision and logical analysis, using the most probable or syndromic diagnosis, laboratory and instrumental examination data, conclusions of differential diagnosis, knowledge of the person, his organs and systems, adhering to appropriate ethical and legal norms.

- **15.** Determine the necessary mode of work and rest in the treatment of the disease (according to list 2), in a health care facility, at home with the patient and at the stages of medical evacuation, including in the field, on the basis of preliminary clinical diagnosis, using knowledge about a person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

- **16.** Determine the necessary medical nutrition in the treatment of the disease (according to list 2), in a health care facility, at the patient's home and at the stages of medical evacuation, including in the field on the basis of a preliminary clinical diagnosis, using knowledge about the person, its bodies and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

- **17.** Determine the nature of treatment (conservative, operative) of the disease (according to list 2), in a health care facility, at home at the patient and at the stages of medical evacuation, including in the field on the basis of a previous clinical diagnosis, using knowledge of man, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes. Define the principles of treatment

disease (according to list 2), in a health care facility, at the patient's home and at the stages of medical evacuation, including field conditions, on the basis of a preliminary

clinical diagnosis, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

- **18** . Establish a diagnosis (according to list 3) by making an informed decision and assessing the human condition, under any circumstances (at home, on the street, health care facility, its units), including in an emergency, in the field , in conditions of lack of information and limited time, using standard techniques physical examination and possible anamnesis, knowledge of the person, his organs and systems, adhering to the relevant ethical and legal norms.

- **22** . Perform medical manipulations (according to list 5) in a medical institution, at home or at work on the basis of previous clinical diagnosis and / or indicators of the patient's condition, using knowledge of the person, his organs and systems, adhering to relevant ethical and legal norms, by making informed decisions and using standard techniques.

- **25**. To form, in the conditions of a health care institution, its subdivision on production, using the generalized procedure of an estimation of a state of human health, knowledge of the person, its bodies and systems, adhering to the corresponding ethical and legal norms, by acceptance of the reasonable decision , among the fixed contingent of the population :
 - dispensary groups of patients;
 - groups of healthy people subject to dispensary supervision (newborns, children, adolescents, pregnant women, representatives of professions that must undergo a mandatory dispensary examination).

- **28**. Organize secondary and tertiary prevention measures among the assigned population, using a generalized procedure for assessing human health (screening, preventive medical examination, seeking medical care), knowledge about the person, his organs and systems , adhering to the relevant ethical and legal norms, by making an informed decision, in the conditions of a health care institution, in particular: to form groups of dispensary supervision; to organize medical and health-improving measures differentiated from the group of medical examination.

- **30**. To be carried out in the conditions of a health care institution, its subdivision:
 - detection and early diagnosis of infectious diseases (according to list2);
 - * primary anti-epidemic measures in the center of an infectious disease.

- **32** . In the health care facility, or at the patient's home on the basis of the obtained data on the patient's health, using standard schemes, using knowledge about the person, his organs and systems, adhering to relevant ethical and legal norms , by making an informed decision:
 - to determine the tactics of examination and secondary prevention of patients subject to dispensary supervision;
 - to determine the tactics of examination and primary prevention of healthy persons subject to dispensary supervision;
 - calculate and assign the necessary products catering to children of the first year of life.

- **33** . Determine the presence and degree of limitations of life, type, degree and duration of disability with the issuance of relevant documents, in the conditions of the health care institution on the basis of data on the disease and its course, features of professional activity.

- **35** . On the territory of service according to standard methods of descriptive, analytical epidemiological and medical-statistical researches :
 - to conduct screening for the detection of major non-communicable diseases;
 - to assess in the dynamics and in comparison with the average static data indicators of morbidity, including chronic non-communicable diseases, disability, mortality, integrated health indicators; identify risk factors for the occurrence and course of diseases; to form risk groups of the population.

- **41**. In the conditions of a health care institution or its subdivision according to standard methods:
 - select and use unified clinical protocols for the provision of medical care, developed on the basis of evidence medicine;
 - take part in the development of local protocols for medical care;
 - to control the quality of medical care on the basis of statistical data, expert evaluation and sociological research data using indicators of structure, process and results of activities;
 - identify factors that hinder the improvement of the quality and safety of medical care.

3. The program of the discipline

The educational process is organized according to the European Credit Transfer and Accumulation System (ECTS).

The curriculum is structured into two blocks, each of which is divided into content sections:

BLOCK 1.

MAIN METHODS OF EXAMINATION OF PATIENTS IN THE INTERNAL CLINIC

DISEASE

Content sections:

1. Introduction to the clinic of internal medicine. Basic rules of questioning and examination of the patient.
2. Physical and instrumental methods of studying the state of the broncho-pulmonary system.
3. Physical methods of research of cardiovascular system.
4. Instrumental methods of research of cardiovascular system.
5. The main methods of examination of the organs of the gastrointestinal tract and kidneys.

BLOCK 2.

SYMPTOMS AND SYNDROMES IN INTERNAL DISEASES

BODIES

Content sections :

6. The main symptoms and syndromes in diseases of the cardiovascular system.
7. The main symptoms and syndromes of respiratory diseases.
8. The main symptoms and syndromes in diseases of the gastrointestinal tract and excretory system.
9. Endocrine diseases, pathology of the blood system and interpretation of the results of laboratory methods of examination.

BLOCK 1.

"BASIC METHODS OF EXAMINATION OF PATIENTS IN THE CLINIC OF INTERNAL DISEASES"

Semantic section 1. *Introduction to the clinic of internal medicine. Basic rules of questioning and examination of the patient. Specific goals:*

- To master the basic principles of examination of the patient according to the traditions of the domestic therapeutic school
- Methodologically correct questioning and examination of patients with pathology of internal organs
- Interpret the relationship of the patient's complaints and make a preliminary assessment of the affected body system
- Summarize the results of questioning and examination of patients and distinguish on their basis the main symptoms and syndromes

Topic 1. The role and place of propaedeutics of internal medicine among clinical disciplines of therapeutic profile.

Propaedeutics of internal medicine as an introduction to clinical practice. History of formation of propaedeutics of internal medicine in Ukraine and abroad. The contribution of famous clinicians M.Ya. Mudrov, G.A. Zakhar'in, S.P. Botkin, O.O. Ostroumov, T.G. Yanovsky, V.P. Obratsov, M.G. Kurlov, M.M. Hubergritsa, MD Strazheska, MP Konchalovsky, MV Chernorutsky, GF Lang, OL Myasnikov, BS Shklyar in the development of the national propaedeutic school. The main goals and objects of study of propaedeutic medicine. The main methods of examination of patients in the clinic of internal medicine: physical, instrumental, laboratory. **Topic 2. Scheme of medical history. And the anamnestic part of the medical history.**

Medical history of the disease: its main sections and rules of compilation. Methods of questioning the patient, its diagnostic value, systematic conduct, taking into account the individual, intellectual and psychological characteristics of the patient. The main structural parts of the anamnesis (passport part, patient complaints, anamnesis of the disease, interrogation of organs and systems, anamnesis of life). The role of Ukrainian and Russian clinicians in the development of the professional art of patient interviewing. **Topic 3. General examination of the patient. Examination of individual parts of the body.**

Methods of general examination of the patient. Determination of the general condition of the patient (types of general conditions of the patient and their criteria), assessment of the state of his consciousness (types of disorders), posture, gait (types of posture and gait in various pathologies), position in bed (active, passive, forced, their types). Physique and basic criteria of normal constitutional types. Skin, its properties (color, elasticity, humidity, temperature, rash elements, nevi, scars, scars) and pathological changes; assessment of hair

and nails. Subcutaneous tissue (fatness, 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.

Methods and sequence of examination of the head and neck, limbs and torso, abdomen and chest. Diagnostic value of the symptoms received during inspection of separate parts of a body of the patient.

Semantic section 2. Physical and instrumental methods of studying the state of the broncho-pulmonary system.

Specific goals:

- Methodologically correct questioning and physical examination of patients with respiratory diseases
- Analyze the results of instrumental studies of the respiratory system (spirometry and pneumotachometry)
- Summarize the results of the examination of the broncho-pulmonary system and distinguish the main symptoms and syndromes of its defeat

Topic 4. The main complaints of patients with respiratory diseases. Examination and palpation of the chest.

The sequence of clarification and detailing of the most important subjective symptoms and their semiological assessment. Features of clarifying the anamnesis of the disease and life. Methods of conducting 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 respiration (Cheyne-Stokes, Biot, Kussmaul, Grocco), their characteristics and causes. The sequence of chest palpation, determination of vocal tremor and semiological evaluation of its results.

Topic 5. Percussion as a method of physical examination of the lungs. Methods of comparative and topographic percussion of the lungs.

History of percussion as a method of physical examination. The role of percussion in determining the condition of the lungs. Classification of percussion by purpose, by the force of percussion, by the method of conducting. Varieties and conditions of percussion tones. The main topographic areas and landmarks on the surface of the chest. The main tasks and methods of comparative percussion of the lungs. The sequence of characteristics and diagnostic value of the obtained data. Causes of dull, tympanic, dull-tympanic, box percussion tones over the lungs.

Basic topographic lines on the surface of the chest. The main tasks and sequence of topographic percussion of the lungs. Determining the height of the apices of the lungs in front and behind, the width of the Krenig fields. The sequence of determining the lower limit of the lungs, active and passive mobility of the lower lung edge. Traube space, its importance in lung pathology.

Topic 6. Auscultation as a method of physical examination of the lungs. Method of lung auscultation. Basic respiratory noises.

History of development of auscultation as a method of physical examination of the patient. Rules for using a stethoscope and phonendoscope. Methods of conducting approximate comparative auscultation of the lungs. The main respiratory noises: vesicular and bronchial respiration, their quantitative and qualitative changes, conditions of occurrence. Methods for determining bronchophonia and its diagnostic value.

Topic 7. Pulmonary auscultation: additional respiratory noises (wheezing, crepitation, pleural friction noise).

Classification of additional respiratory noises (wheezing, crepitation, pleural friction noise). Causes of dry and wet rales, their varieties. Diagnostic value of consonant and non-consonant rales. Um Ova occurrence of crepitation and pleural friction noise. Differential signs of additional respiratory noises. Additional auscultatory phenomena (noise of Hippocrates' splash, noise of a falling drop, noise of a "water pipe"), the reasons of their occurrence and diagnostic value.

Topic 8. Instrumental and laboratory methods of respiratory research.

Indications and methods of spirometry and pneumotachometry, the main indicators are normal, changes in obstructive and restrictive variants of respiratory disorders. Familiarity with the method of conducting and diagnostic value of bronchoscopy and bronchography. Pleural puncture (technique and laboratory examination of the puncture). Laboratory examination of sputum. X-ray examination of the chest, its types and diagnostic value. Computed tomography of the chest, the main indications for its implementation.

Intermediate control of assimilation of content sections 1, 2.

Semantic section 3. Physical methods of research of cardiovascular system.

Specific goals:

- Methodologically correct questioning and physical examination of patients with diseases of the cardiovascular system
- Summarize the results of physical examination of the cardiovascular system and distinguish the main symptoms of its defeat
- Analyze the relationship between the results of the survey and physical methods of examination of the cardiovascular system and identify the main syndromes of its defeat

Topic 9. Physical methods of research of cardiovascular system. Interrogation and general examination of patients with pathology of the cardiovascular system.

Diagnostic value of the main physical methods of examination of the circulatory system (interrogation, examination, palpation, percussion, auscultation). The sequence of clarification and detailing of complaints of a patient with cardiovascular pathology. Features of collecting medical history and life. Conducting a general examination of a cardiac patient.

Curation of the patient to write anamnestic section of the medical history.

Topic 10. Investigation of pulse (arterial, venous, pseudocapillary) and blood pressure.

Vessels available to determine the pulse (arterial, venous). Rules and sequence of pulse examination on the radial artery. Determination of the main properties of the pulse (synchronicity, rhythm, frequency, voltage, filling, height, speed, uniformity), detection of deficit, lability, paradoxicality, dichroic pulse. Rules for measuring blood pressure in the upper and lower extremities. Basic methods of determining blood pressure. The concept of Korotkov's tones. The main parameters that determine the indicators of systolic and diastolic blood pressure. The concept of pulse and mean dynamic blood pressure. Normal blood pressure values according to WHO / MTG criteria.

Topic 11. Examination and palpation of the atrial area. Percussion of the boundaries of relative and absolute cardiac dullness, determination of the width of the vascular bundle. The sequence of examination of the heart. Diagnostic value of cardiac hump, pulsations in the heart and neck. Methods and techniques of palpation of the precordial area: apical shock

(localization, area, force, height, resistance, displacement, causes of negative apical shock); heartbeat, causes of its occurrence and methods of determination; pulsation of the abdominal aorta, liver, Plesch 's symptom, pulsation of the ascending aorta and its arch, detection of pulsation of the pulmonary trunk. Presystolic and systolic tremor (symptom of "cat purr"), causes.

The concept of relative and absolute cardiac dullness, their percussion (sequence: right, upper, left border) and changes in pathology. Structures forming the vascular bundle, percussion determination of its width.

Topic 12. Auscultation of the heart. Normal heart tones, splitting and bifurcation of tones, additional tones (quail rhythm, gallop rhythm).

Methods and techniques of auscultation of the heart in accordance with the traditions of the Kiev therapeutic school. Main and additional points of auscultation. Places of projection and the best listening of heart valves. The mechanism of formation of heart tones. Causes of strengthening and weakening of tones. Tone accent. Tone changes in tone (clapping, muffled, velvet, metallic, cannon tones). The concept of splitting and bifurcation of heart tones, the reasons for their occurrence and temporal characteristics. Additional tones - mitral valve opening tone , gallop tones (protodiastolic, mesodiastolic and presystolic gallop rhythm). Methodological features of auscultation of the heart - directly by ear, stethoscope, phonendoscope: in the position of the patient standing, lying down, at rest and after exercise. **Topic 13. Auscultation of the heart: organic and functional heart murmurs.**

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

Contents Section 4. Instrumental methods for the study of the cardiovascular system.

Specific goals:

- Demonstrate mastery of electrocardiogram (ECG) recording techniques
- To interpret the mechanisms of formation of ECG elements in normal and pathological conditions
- Identify changes in the elements of the ECG, characteristic of the violation of the basic functions of the heart (automatism, excitability, conductivity, refractoriness)
- Analyze the results of electrocardiographic and phonocardiographic examination and distinguish on their basis the main symptoms and syndromes of heart disease
- Summarize the results of echocardiographic, phlebographic and rheovasographic studies and make a preliminary conclusion about the nature of the lesion of the cardiovascular system

Topic 14. Electrocardiographic method of studying heart function. Methods of ECG recording and decoding. ECG signs of atrial and ventricular hypertrophy.

Clinical and diagnostic value of the method of electrocardiography. Biophysical and physiological bases of an ECG. The structure and function of heart rate drivers and conduction system. The main and additional ways of conducting the pulse. Methods and techniques of ECG recording: standard leads, unipolar leads from the extremities, chest leads. The main elements of the ECG: the value of the duration and amplitude of the teeth, the duration of the intervals and segments are normal. Algorithm and technique of ECG decoding. ECG signs of hypertrophy of the right and left atria and ventricles.

Topic 15. Electrocardiographic examination of patients with disorders of automatism and excitability.

The main structures that provide the function of automaticity of the heart. ECG signs of automatic disorders: sinus tachycardia, sinus bradycardia, sinus arrhythmia, sinus weakness syndrome. See extrasystole. ECG signs of sinus, atrial, atrioventricular and ventricular extrasystoles. Differentiation of right and left ventricular extrasystoles. Classification of ventricular extrasystoles. Types of allorhythms.

Topic 16. Electrocardiographic examination of patients with conduction disorders. ECG signs of combined heart rhythm disorders. The conduction time of the pulse in different parts of the conduction system of the heart. ECG signs of sino-auricular and intraatrial block. Classification and ECG signs of atrio-ventricular block. Morgan-Adams-Stokes attacks, their cause and clinical manifestations. Intraventricular blockade, differentiation of blockade of the left and right leg of the His bundle. Acquaintance with indications for carrying out and rules of performance of electropulse therapy.

ECG and clinical signs of atrial fibrillation and flutter. Clean Ichnya signs and ECG signs with atrial ventricular paroxysmal ventricular tachycardia, ventricular fibrillation.

Topic 17. Instrumental methods of examination of the cardiovascular system.

Phonocardiography: diagnostic value of the method, methods of registration and principles of decoding FCG. Polycardiography. Echocardiography: diagnostic value of the method, technique and technique of echocardiographic examination. The most important echocardiographic parameters are the volumes of the heart cavities, the ejection fraction, the thickness of the interventricular septum and the posterior wall of the left ventricle. Dopplerography of the heart and blood vessels. Phlebography, rheovasography: diagnostic value of methods. Research methods and techniques.

Intermediate control of assimilation of content sections 3, 4.

Content section 5. *The main methods of research of the organs of the gastrointestinal tract and kidneys* Specific objectives:

- Methodologically correct questioning and physical examination of patients with diseases of the digestive system
- Summarize the results of physical examination of the gastrointestinal tract and distinguish the main symptoms of its defeat
- Analyze the relationship between the results of the survey and physical methods of examination of the digestive system and identify the main syndromes of its defeat
- Analyze the results of instrumental (fibrogastroduodenoscopy, X-ray examinations) and laboratory (studies of gastric contents and duodenal sounding) studies of the digestive system and kidneys

Topic 18. Questioning and examination of patients with diseases of the gastrointestinal tract. Examination and superficial palpation of the abdomen.

The sequence of clarification and detailing of complaints of a patient with pathology of the gastrointestinal tract. Features of collecting medical history and life. Changes in the appearance of the patient with various pathologies of the gastrointestinal tract. Sequence of examination of the abdomen (shape, size, symmetry, condition of the skin and navel, fatness, condition of subcutaneous vessels, the nature of hair growth). 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 large and small radius, checking the symptoms of peritoneal irritation, detecting differences in the rectus abdominis, the presence of umbilical hernias and hernias of the white line of the abdomen). Methods of detection of ascites (review, percussion and fluctuations).

Topic 19. Deep sliding methodical palpation of the intestine and stomach.

The role of domestic clinicians in the development of the method of palpation of the abdominal cavity. Projection of the gastrointestinal tract on the surface of the abdomen. The sequence of deep sliding methodical palpation of the intestinal tract by the method of Obraztsov-Strazhesk: normal parameters of the sigmoid, cecum, terminal ileum, ascending, descending and transverse colon. Methods for determining the lower limit of the hole (percussion, palpation, stethoacoustic, splash noise). Rules of palpation of the goalkeeper.

Topic 20. Deep sliding methodical palpation of the liver, spleen, kidneys.

Percussion determination of the size and boundaries of the liver by the methods of Obraztsov and Kurlov. Causes of increase and decrease in the size of the liver. Methods 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. Methods of percussion determination of the size of the spleen, the main reasons for its increase. Rules of palpation of the spleen. Diagnostic value of determining Pasternatsky's symptom. Methods of palpation of the kidneys in the position of standing and lying down.

Topic 21. Instrumental and laboratory methods of studying the state of the gastrointestinal tract.

Acquaintance with indications and methods of fibrogastroduodenoscopy and fibrocolonoscopy. Modern methods of studying the secretory and acid-producing activity of the stomach. Methods of intragastric pH-metry, fractional study of gastric contents, analysis of the obtained data. Methods of multi-moment duodenal sounding, analysis of the obtained data. X-ray methods of examination of the gastrointestinal tract and kidneys, scintigraphy of the kidneys. Intermediate control of mastering the content section 5.

BLOCK 2.

"SYMPTOMS AND SYNDROMES IN DISEASES OF INTERNAL ORGANS"

Content section 6: *Main symptoms and syndromes in diseases of the cardiovascular system* *Specific objectives:*

- To summarize the results of questioning, physical and instrumental examination of a patient with a specific pathology of the cardiovascular system and to distinguish the main symptoms and syndromes of its defeat
- Identify the main syndromes in diseases of the cardiovascular system and explain the mechanisms of their development
- Choose adequate methods of examination for specific diseases of the cardiovascular system
- demonstrate the modern classification of diseases of the cardiovascular syst EMI

Topic 1. Mitral heart defects: main symptoms and syndromes based on clinical and instrumental methods of examination.

Identification and prevalence of heart defects, heart rate. Rheumatism, modern classification and main clinical manifestations.

The main causes and mechanisms of mitral regurgitation and mitral stenosis. Changes in hemodynamics in mitral heart disease. The value of the Chinese reflex. The main complaints of patients with mitral stenosis and mitral valve insufficiency. Examination data, palpation of the atrial area and percussion in mitral heart disease.

Auscultatory picture of mitral stenosis and mitral regurgitation. ECG and FCG are signs of mitral heart disease. Radiological signs of mitral regurgitation. The concept of mitral valve prolapse.

Topic 2. Aortic heart defects: main symptoms and syndromes based on clinical and instrumental methods of examination.

Etiological factors and mechanisms of aortic insufficiency and aortic stenosis. Changes in hemodynamics in aortic heart disease. The main complaints of patients with aortic stenosis and aortic valve insufficiency. Examination data, palpation of the atrial area and percussion in aortic heart disease. Auscultatory picture of aortic stenosis and aortic insufficiency. ECG and FCG signs of aortic heart defects. Radiological signs of aortic defects.

Topic 3. The main symptoms and syndromes of hypertension. Hypertensive crises.

WHO / MTG determination for hypertension, essential hypertension (hypertension) and symptomatic hypertension. The main risk factors for hypertension and the mechanisms of its development. Classification of hypertension by blood pressure levels and with target organ damage. The main complaints of the patient with hypertension, examination data, palpation of the precordial area, percussion of the boundaries of cardiac dullness and auscultation of the heart. ECG signs of myocardial infarction in hypertension. Symptomatic hypertension. Complicated and uncomplicated hypertensive crises.

Topic 4. Ischemic heart disease: the main symptoms and syndromes of angina and myocardial infarction.

Definition of "ischemic heart disease" (IHD). The main pathogenetic mechanisms and risk factors for coronary heart disease. Modern classification of coronary heart disease. Definition and main clinical manifestations of angina. Functional classes of angina. Methods of objective diagnosis of angina (ECG, daily ECG monitoring, stress tests, coronary angiography, heart scintigraphy). Unstable angina, the 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 different forms of myocardial infarction in different periods of its course. Modern laboratory markers of myocardial necrosis.

Topic 5. Heart failure syndrome: basic clinical and instrumental methods of examination. Acute and chronic vascular insufficiency.

Determination of heart failure and the main pathogenetic pathways of its development. Modern classification of heart failure (stages of heart failure, hemodynamic variant, functional classes of patients). The main clinical manifestations of heart failure and data of instrumental and laboratory methods of research confirming its presence. Vascular insufficiency and its main types: fainting, collapse, shock. The concept of syncopal states, the mechanism of their occurrence and the main clinical manifestations.

Content section 7. *The main symptoms and syndromes of respiratory diseases.*

Specific goals:

- To summarize the results of questioning, physical and instrumental examination of a patient with a specific pathology of the respiratory system and to distinguish the main symptoms and syndromes of its defeat
- Identify the main syndromes in diseases of the respiratory system and explain the mechanisms of their development
- To choose adequate methods of inspection at concrete syndromes of defeat of broncho-pulmonary system
- Interpret the main results of laboratory and instrumental examinations of the respiratory system in a particular pathology
- Where to demonstrate the possession of modern classifications of diseases of the respiratory system

Topic 6. The main clinical manifestations of chronic bronchitis and bronchial asthma. Chronic obstructive pulmonary disease.

Definition and main mechanisms of development of chronic bronchitis and bronchial asthma. The main complaints and data of physical examination of patients with chronic bronchitis and bronchial asthma. Syndrome of bronchial obstruction, mucociliary insufficiency and increased lung ventilation. Basic methods of instrumental diagnostics . Laboratory signs of bronchial asthma according to the general analysis of blood and sputum research. Definition and main clinical manifestations of bronchiectasis. The concept of chronic obstructive pulmonary disease.

Topic 7. The main symptoms and syndromes of pneumonia on the basis of clinical and laboratory research methods .

Pneumosclerosis. Lung cancer.

Definition and modern classification of pneumonia (hospital, non-hospital, aspiration, pneumonia in immunocompromised individuals), classification by the nature of lung damage (pleuropneumonia, bronchopneumonia, interstitial pneumonia). The main etiological factors of pneumonia. Complaints of patients and features of these physical methods of examination of patients with pleuro- and bronchopneumonia. Criteria for severe pneumonia. Possibilities of instrumental diagnostics of pulmonary tissue compaction. Laboratory signs of inflammatory syndrome in pneumonia. The main causes of pneumosclerosis. Data of physical and instrumental examination of a patient with pneumosclerosis. The main clinical forms of lung cancer: features of manifestations in the central and peripheral localization of cancer. With indrome compression of lung tissue.

Topic 8. The main symptoms and syndromes of pleurisy on the basis of clinical and laboratory research methods.

Causes of inflammation of the pleural leaves. Ways of formation and circulation of intrapleural fluid in normal and pathology. Features of the patient's complaints with dry and exudative pleurisy, the difference between the data of physical examination (palpation, percussion, lung auscultation) in different forms of pleurisy. Syndromes of accumulation of fluid and air in the pleural cavity. Possibilities of instrumental diagnostics. Pleural puncture: study of the contents of the pleural cavity. The difference between exudate and transudate according to physical and laboratory examination. The main clinical manifestations and stages of the syndrome of respiratory failure in lung diseases.

Content section 8. *The main symptoms and syndromes in diseases of the gastrointestinal tract and excretory system.*

Specific goals:

- Summarize the results of questioning, physical and instrumental examination of a patient with a specific pathology of the gastrointestinal tract or excretory system and distinguish the main symptoms and syndromes of their defeat
- Identify the main syndromes in diseases of the digestive and excretory systems and explain the mechanisms of their development
- To interpret changes in the main laboratory parameters in pathology of the gastrointestinal tract and excretory system
- Choose adequate methods of examination for specific diseases of the digestive and excretory systems
- Demonstrate mastery of modern classifications of diseases of the gastrointestinal tract and excretory system

Topic 9. *Clinical and instrumental and laboratory studies of patients with chronic gastritis, peptic ulcer of the stomach and duodenum, intestinal diseases . The main symptoms and syndromes.*

Definition and modern classification of gastritis and peptic ulcer of the stomach and duodenum. The main etiological factors of these diseases. Prevalence of *Helicobacter pylori*, conditions of damage to the gastric mucosa and 1 2 duodenum. The main complaints of patients with chronic gastritis and peptic ulcer. Features of the pain syndrome depending on the location of the pathological focus and the state of 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. The main symptoms and syndromes in patients with enteritis and colitis: intestinal dyspepsia syndrome, malabsorption and maldigestion syndromes, irritable bowel syndrome.

Topic 10. *The main symptoms and syndromes in diseases of the hepatobiliary system*

Definition and principles of modern classification of chronic cholecystitis and cholangitis. The concept of dyskinesia of the biliary tract and their types. The main complaints of patients with cholecystitis and cholangitis. Physical examination data of patients with chronic cholecystitis and cholangitis. The concept of cutaneous-visceral and viscerocutaneous symptoms in diseases of the biliary tract. Instrumental research methods in pathology of the biliary tract, laboratory diagnosis and the results of duodenal sounding. Gallstone disease: main complaints and physical examination data. Features of the pain syndrome. The main manifestations of jaundice and cholestasis syndrome, their laboratory signs.

Definition and principles of modern classification of chronic hepatitis and liver cirrhosis. The main etiological factors for 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 concept of the index of histological activity and Child-Pew criteria. Syndromes of portal hypertension, liver failure and hepatolienal syndrome in liver lesions. The main complications of liver cirrhosis.

Topic 11. *The main symptoms and syndromes of kidney disease - acute and chronic glomerulonephritis and pyelonephritis.*

Definition and modern classification of glomerulonephritis and pyelonephritis. The main mechanisms of glomerulonephritis and pyelonephritis. Complaints of patients with kidney disease and the results of physical examination of patients with glomerulonephritis and pyelonephritis. Edema syndrome and hypertension syndrome in kidney disease. Possibilities of instrumental diagnosis of renal pathology. Laboratory examination of urine, analysis and interpretation of the results of general clinical analysis of urine, study of urine according to Nechiporenko, Amburje, Addis-Kakovsky, Zymnitsky. Urinary, nephrotic syndromes in kidney disease. The results of biochemical blood tests in renal pathology. Syndromes of renal failure and renal colic. Definition and classification of chronic kidney disease.

Content section 9. *Endocrine diseases, pathology of the blood system and interpretation of the results of laboratory methods of examination.*

Specific goals:

- Summarize the results of questioning, physical and instrumental examination of a patient with a specific endocrine disease or pathology of the blood system and distinguish the main symptoms and syndromes of their defeat
- Identify the main syndromes in diseases of the endocrine and hematopoietic systems and explain the mechanisms of their development
- To interpret changes in the main laboratory parameters in pathology of the endocrine and hematopoietic systems
- Choose adequate methods of examination for specific endocrine diseases and pathologies of the blood system

Topic 12. The main symptoms and syndromes of anemia. General clinical blood test.

Definition and modern classification of anemias. Basic laboratory criteria for anemia. The mechanism of development of iron deficiency in the body and the occurrence of lysis-deficient anemia. The main clinical manifestations of sideropenic and general hypoxic syndromes in iron deficiency anemia. Laboratory criteria for iron deficiency anemia. The causes and pathogenesis in 12 -foliyevodefitsytnoyi anemia. Manifestations of general anemic syndrome y, syndromes of digestive tract lesions, funicular myelosis and peripheral blood lesions in B 12 -foil deficiency anemia. The main laboratory signs of B- 12 are foil deficiency anemia. Congenital and acquired hemolytic anemias: manifestations of general anemic, jaundice syndromes, splenomegaly and hemosiderosis of internal organs. The main laboratory criteria of hemolytic anemia and features of bilirubin metabolism disorders. Analysis and interpretation of general clinical blood test.

Topic 13. Hemorrhagic syndromes and pathology of the blood coagulation system. Disseminated intravascular microcoagulation syndrome. The main components of the blood coagulation system. Factors of bleeding development and causes of hemorrhagic syndromes - thrombocytopenia, coagulopathy, hemorrhagic vasculitis. Characteristics of hemorrhagic syndrome in hemophilia, thrombocytopenic purpura and Shenlein-Henoch disease. Manifestations of joint, abdominal, renal and anemic syndromes in these diseases. Basic methods of laboratory diagnosis of hemorrhagic syndromes. Causes of development and pathogenesis of disseminated intravascular coagulation syndrome (DIC). Stages and clinical manifestations of DIC syndrome, its main laboratory criteria.

Topic 14. The main symptoms and syndromes of diabetes and. The main clinical manifestations of thyroid disease.

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

The main etiological factors of thyroid disease. 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. The concept of thyrotoxic crisis. The main clinical manifestations of myxedema, the concept of hypothyroid coma.

The structure of the discipline "Propaedeutics of Internal Medicine"

Names of sections and topics	Number of hours				
	Total	Lectures	Practical training	CPC	
				Individual.	Alone.
BLOCK 1. The main methods of examination of patients in the clinic of internal medicine					
<i>Introduction to the clinic of internal medicine. Basic rules of questioning and examination of the patient.</i>					
Topic 1. The role and place of propaedeutics of internal medicine among clinical disciplines of therapeutic profile. The scheme of the medical history. The main complaints of patients. Anamnestic part of the medical history. General examination of the patient.	8	2	2	-	4
<i>Semantic section 2. Physical and instrumental methods of studying the state of the broncho-pulmonary system.</i>					
Topic 2. Palpation of the chest. Methods of comparative and topographic percussion of the lungs.	10	2	2		6
Topic 3. Auscultation of the lungs. Basic and additional respiratory noises. Instrumental and laboratory methods of respiratory research.	8		2		6
<i>Content section 3. Physical methods of research of cardiovascular system. Instrumental methods of research of cardiovascular system</i>					
Topic 4. Physical methods of research of cardiovascular system. Interrogation and general examination of patients. Examination of pulse (arterial,	10	2	2		6

venous, pseudocapillary) and blood pressure. Palpation, percussion of the boundaries of relative and cardiac dullness, determination of the width of the vascular bundle.					
Topic 5. Auscultation of the heart. Normal heart tones. organic and functional heart murmurs. Electrocardiographic method of studying heart function. Methods of ECG recording and decoding.	10	2	2		6
<i>Content section 5. The main methods of research of the organs of the gastrointestinal tract and kidneys</i>					
Topic 6. Questioning and examination of patients with diseases of the gastrointestinal tract. Examination, superficial and deep palpation of the gastrointestinal tract	6		2	-	4
Topic 7. Methodical palpation of the liver, spleen, kidneys. Instrumental and laboratory methods of studying the state of the gastrointestinal tract.	7	-	2	-	5
Intermediate control of students' knowledge	1	-	1	-	
Total hours from BLOCK 1 - 60 ECTS credits - 2.0	60	8	15		37
BLOCK 2. Symptoms and syndromes in diseases of internal organs					
<i>Content section 6. The main symptoms and syndromes of heart disease</i>					

Names of sections and topics	Number of hours				
	Total	Lectures	Practical training	CPC	
				Individual.	Alone.
<i>vascular system</i>					
Topic 8. Symptoms and syndromes of hypertension. Hypertensive crises.	10	2	4	-	4
Topic 9. Ischemic heart disease: the main symptoms and syndromes of angina and myocardial infarction.	2		2		

Topic 10. Heart failure syndrome: basic clinical and instrumental methods of examination. Acute and chronic vascular insufficiency.	2		2		
Topic 11. Mitral heart disease: main symptoms and syndromes on the basis of clinical and instrumental methods of examination.	6	-	2	-	4
Topic 12. Aortic heart disease: the main symptoms and syndromes on the basis of clinical and instrumental methods of examination.	6	-	2	-	4
<i>Content section 7. The main symptoms and syndromes of respiratory diseases</i>					
Topic 13. The main clinical manifestations of chronic bronchitis and bronchial asthma. Chronic obstructive pulmonary disease.	6	2	2	-	2
Topic 14. The main symptoms and syndromes of pneumonia on the basis of clinical and instrumental and laboratory research methods. Pneumosclerosis. Lung cancer.	2		2		
Topic 15. The main symptoms and syndromes of pleurisy on the basis of clinical and instrumental and laboratory research methods.	4		4		

<i>ntptoms and syndromes in diseases of the gastrointestinal tract and excretory system</i>					
Topic 16. Clinical and instrumental and laboratory studies of patients with chronic gastritis, peptic ulcer of the stomach and duodenum, intestinal disease. The main symptoms and syndromes	6	2	2	-	2

Topic 17. The main symptoms and syndromes of the biliary tract - chronic cholecystitis, cholangitis, gallstone disease. The main clinical and laboratory manifestations of chronic hepatitis and liver cirrhosis.	6		4		2
Topic 18. The main symptoms and syndromes of kidney disease - acute and chronic glomerulonephritis and pyelonephritis. Chronic kidney disease.	4		4		
section 9. Endocrine diseases, pathology of the blood system and interpretation of the results of laboratory methods of examination					
Topic 19. The main symptoms and syndromes of anemia. General clinical blood test.	6	2	2	-	2
Topic 20. Hemorrhagic syndrome and pathology of the blood coagulation system. Disseminated intravascular microcoagulation syndrome.	5	1	2		2
Topic 21. The main symptoms and syndromes of diabetes.	4		2		2
Topic 22. The main clinical manifestations of thyroid disease.	4		2		2
Final control of knowledge and skills of students to identify the main symptoms and syndromes of diseases of internal organs	2		2		
Total hours from BLOCK 2 - 75 ECTS credits - 2.5	75	9	40		26
ALL HOURS WITH DISCIPLINES - 135 LOANS - 4.5	135	17	55		63

* Curation of a patient with a pathology independently chosen by the student while studying the relevant content section with writing a medical history.

The content of the discipline

4.1. Lecture plan

№ s / n	Name topics	Number of hours
BLOCK 1. The main methods of examination of patients in the clinic of internal medicine		
1.	Topic 1. The role and place of propaedeutics of internal medicine among clinical disciplines of therapeutic profile. The scheme of the medical history. Anamnestic part of the medical history. General examination of the patient.	2
2.	Topic 2. The main complaints of patients with respiratory diseases. Examination and palpation of the chest. Methods of comparative and topographic percussion of the lungs. Auscultation of the lungs. Basic and additional respiratory noises. Instrumental and laboratory methods of respiratory research.	2
3.	Topic 3. Physical methods of research of cardiovascular system. Interrogation and general examination of patients. Examination of pulse (arterial, venous, pseudocapillary) and blood pressure. Palpation, percussion of the limits of relative and cardiac dullness, determination of the width of the vascular bundle.	2
4.	Topic 4. Auscultation of the heart. Normal heart tones. Normal heart tones. organic and functional heart murmurs.	2
Total from block 1		8
BLOCK 2. Symptoms and syndromes in diseases of internal organs		
1.	Topic 5. Symptoms and syndromes of hypertension. Hypertensive crises. Ischemic heart disease: main symptoms and syndromes in angina and myocardial infarction. Heart failure syndrome. Acute and chronic vascular insufficiency.	2
2.	Topic 6. The main clinical manifestations of chronic bronchitis, bronchial asthma, chronic obstructive pulmonary disease, pneumonia, pleurisy.	2
3.	Topic 7. The main symptoms and syndromes of chronic gastritis, peptic ulcer of the stomach and duodenum, intestinal diseases, biliary tract - chronic cholecystitis, cholangitis, gallstone disease, acute and chronic glomerulonephritis and pyelonephritis.	2
4.	Topic 8. The main symptoms and syndromes of anemia. Hemorrhagic syndromes and pathology of the blood coagulation system.	2
5.	Topic 9. Dry and exudative pleurisy: symptoms and syndromes based on clinical-instrumental and laboratory research methods. Syndromes of accumulation of fluid and air in the pleural cavity in pathology of the broncho-pulmonary system.	2
Total from block 2		9
TOTAL FROM THE DISCIPLINE		17

4.2. Plan of practical classes

№ s / n	Name topics	Number of hours
BLOCK 1. The main methods of examination of patients in the clinic of internal medicine		
<i>Content section 1.</i> <i>Introduction to the clinic of internal medicine.</i> <i>Basic rules of questioning and examination of the patient .</i>		

№ s / n	Name topics	Number of hours
1.	Topic 1. The role and place of propaedeutics of internal medicine among clinical disciplines of therapeutic profile. The scheme of the medical history. Anamnestic part of the medical history. General examination of the patient.	2.0
<i>Content section 2.</i> <i>Physical and instrumental methods of studying the state of the broncho-pulmonary system</i>		
2.	Topic 2. Palpation of the chest. Methods of comparative and topographic percussion of the lungs.	2.0
3.	Topic 3. Auscultation of the lungs. Basic and additional respiratory noises. Instrumental and laboratory methods of respiratory research.	2.0
4.	Topic 4. Physical methods of research of cardiovascular system. Interrogation and general examination of patients. Examination of pulse (arterial, venous, pseudocapillary) and blood pressure. Palpation, percussion of the boundaries of relative and cardiac dullness, determination of the width of the vascular bundle.	2.0
5.	Topic 5. Auscultation of the heart. Normal heart tones. Normal heart tones. organic and functional heart murmurs.	2.0
6.	Topic 6. Questioning and examination of patients with diseases of the gastrointestinal tract. Examination, deep and superficial palpation of the intestines and stomach	2.0
7.	Topic 7. Methodical palpation of the liver, spleen, kidneys. Instrumental and laboratory methods of studying the state of the gastrointestinal tract.	2.0
8.	Intermediate control of students' knowledge	1.0

<i>Total from block 1</i>		15
BLOCK 2.		
Symptoms and syndromes of diseases of the internal organs		
<i>Content section 6. The main symptoms and syndromes in diseases of the cardiovascular system</i>		
9.	Topic 8. Symptoms and syndromes of hypertension. Hypertensive crises. Heart failure syndrome.	4.0
10.	Topic 9. Ischemic heart disease: the main symptoms and syndromes of angina and myocardial infarction.	2.0
11.	Topic 10. Heart failure syndrome: basic clinical and instrumental methods of examination. Acute and chronic vascular insufficiency.	2.0
12.	Topic 11. Mitral heart defects: main symptoms and syndromes based on clinical and instrumental methods of examination.	2.0
13.	Topic 12. Aortic heart defects: main symptoms and syndromes based on clinical and instrumental methods of examination.	2.0
<i>Content section 7. The main symptoms and syndromes of respiratory diseases</i>		
14.	Topic 13. The main clinical manifestations of chronic bronchitis, bronchial asthma, chronic obstructive pulmonary disease.	2.0
15.	Topic 14. The main symptoms and syndromes of pneumonia on the basis of clinical and instrumental and laboratory research methods. Pneumosclerosis. Lung cancer.	2.0
16.	Topic 15. The main symptoms and syndromes of pleurisy on the basis of clinical and instrumental and laboratory research methods.	4.0
<i>Content section 8. The main symptoms and syndromes in diseases of the gastrointestinal tract and excretory system</i>		
17.	Topic 14. Clinical and instrumental and laboratory studies of patients with chronic gastritis, peptic ulcer of the stomach and duodenum, intestinal diseases. The main symptoms and syndromes.	2.0
18.	Topic 15. The main symptoms and syndromes in diseases of the urinary tract - chronic cholecystitis, cholangitis, gallstone disease. The main clinical and laboratory manifestations of chronic hepatitis and liver cirrhosis.	4.0
19.	Topic 16. The main symptoms and syndromes of kidney disease - acute and chronic glomerulonephritis and pyelonephritis. Chronic kidney disease.	4.0
<i>Semantic section 9. Endocrine diseases, pathology of the blood system and interpretation of the results of laboratory methods of examination</i>		

20.	Topic 15. The main symptoms and syndromes of anemia. General clinical blood test.	2.0
21.	Topic 16. Hemorrhagic syndromes and pathology of the blood coagulation system. Disseminated intravascular microcoagulation syndrome.	2.0
22.	Topic 17. The main symptoms and syndromes of diabetes.	2.0
23.	Topic 18. The main clinical manifestations of thyroid disease.	2.0
24.	Final control of knowledge and skills of students to identify the main symptoms and syndromes of diseases of internal organs.	2.0
Total from block 2		40
TOTAL FROM THE DISCIPLINE		55

4.3. Individual work

The main types of independent work of students are:

- Pre - classroom preparation for practical classes
- Independent study of topics that are not included in the classroom plan
- Mastering the methods of examination of the patient
- Mastering the skills of instrumental methods of examination of the patient
- Analysis and interpretation of the results of instrumental and laboratory methods of examination of the patient
- Independent curation of patients with writing a medical history
- Preparation for intermediate and final modular controls - Execution of individual work

№ s / n	Topic title (or content of the work)	Number of hours
BLOCK 1: "Basic methods of examination of patients in the clinic of internal medicine"		
1.	Preparation for practical classes - theoretical and development of methods of physical examination of the patient	
2.	Independent elaboration of topics that are not included in the plan of classroom classes: Instrumental and laboratory methods of respiratory research Instrumental methods of research of cardiovascular system	- 8.0
3.	Mastering the ability to analyze: - the results of the study of the function of external respiration	-
№ s / n	Topic title (or content of the work)	Number of hours

	- electrocardiographic examination data	4
	- results of intragastric pH-metry and duodenal sounding	4
4.	Writing a medical history (anamnesic part)	4
5.	Individual work: - Carrying out of researches of function of external respiration at indicative patients, processing of the received data and the report at employment - ECG registration, participation in instrumental research in demonstrative patients with data processing and report in class - Conducting an examination of a demonstrative patient and preparing a review of the scientific literature on the case under study	4 2 4
6.	Preparation for intermediate controls of material assimilation: – Intermediate control № 1 (content modules 1, 2) - Intermediate control № 2 (content modules 3, 4) - Intermediate control № 3 (content module 5)	3, incl 2
7.	Preparation for the final control of knowledge and skills of students on the basic methods of examination of patients in the clinic of internal medicine	4
Total from block 1		37
BLOCK 2: " Symptoms and syndromes of diseases of the internal organs"		
1.	Pre-classroom theoretical preparation for practical classes according to the plan of practical classes	4
2.	Elaboration of topics that are not taught in practical classes:	-
	Heart failure syndrome: basic clinical and instrumental methods of examination.	4
	Hemorrhagic syndromes and pathology of the blood coagulation system. Disseminated intravascular coagulation syndrome.	4
	The main symptoms and syndromes of anemia.	2
	The main symptoms and syndromes of diabetes. The main clinical manifestations of thyroid disease.	2
	Aortic heart defects: main symptoms and syndromes based on clinical and instrumental methods of examination	4
3.	Curation of the patient with writing a medical history	4
4.	Preparation for the final control of knowledge and skills to identify the main symptoms and syndromes of diseases of the internal organs	2
Total from block 2		26
TOGETHER FROM THE DISCIPLINE		63

Tasks for independent work

The basic list of types of independent work of students, developed in accordance with the structure of the discipline, is presented in 6 "Independent work". Mandatory type of independent work of students is the supervision of patients and the writing of a detailed medical history, which is provided in the study of block № 2 "Symptoms and syndromes of diseases of the internal organs." The tasks for independent work are:

1. Weekly observation of the patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with pathology of the cardiovascular system with writing a medical history and presenting a clinical case in practice.
2. Weekly observation of the patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with pathology of the bronchopulmonary system with writing a medical history and presenting a clinical case in practice.
3. Weekly observation of the patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with pathology of the digestive system with writing a medical history and presenting a clinical case in practice.
4. Weekly observation of the patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with pathology of the urinary system with writing a medical history and presenting a clinical case in practice.
5. Weekly observation of the patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with pathology of the endocrine system with writing a medical history and presenting a clinical case in practice.
6. Weekly observation of the patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with pathology of the hematopoietic system with writing a medical history and presenting a clinical case in practice.

The student independently chooses the disease for which he will conduct curation (questioning, examination) of the patient.

BLOCK 1

"Basic methods of examination of patients in the clinic of internal medicine":

1. Basic methods of diagnosis of internal diseases.
2. The scheme of questioning the subject. The main structural parts of the anamnesis.
3. The sequence of the general examination of the patient.
4. Types of physique and their main criteria.
5. The sequence of palpation of lymph nodes and the characteristics of the data.
6. Rules for examination of the head and neck.
7. The sequence of examination of the torso and limbs.

8. Static examination of the chest, the diagnostic value of the main symptoms.
9. Dynamic examination of the chest, the diagnostic value of the main symptoms.
10. Examination of the atrial area, the diagnostic value of the main symptoms.
11. The sequence of examination of the abdomen, the definition of the main symptoms.
12. The main properties of the pulse, rules and sequence of their definition.
13. Rules for measuring blood pressure. Determination of systolic and diastolic pressure by the method of Korotkov, calculation of pulse, mean dynamic pressure.
14. Palpation of the chest: the sequence, the clinical significance of the main symptoms.
15. Palpation of the atrial area, determination of the clinical significance of the symptoms found.
16. Superficial palpation of the abdomen: an algorithm for conducting and analyzing the data.
17. Theoretical principles and principles of deep methodical sliding palpation of the abdomen by the method of Obratsov-Strazhesk.
18. Palpation of the sigmoid, cecum, terminal ileum, their properties are normal.
19. Rules of palpation of the ascending and descending colon, their properties are normal.
20. Methods for determining the lower limit of the stomach.
21. Palpation of the transverse colon, the main properties.
22. Rules of palpation of the liver, the diagnostic value of the main symptoms.
23. Palpation of the spleen.
24. Methods for determining the presence of fluid in the abdominal cavity.
25. The sequence of comparative percussion of the lungs. Basic percussion tones and the mechanism of their formation.
26. Algorithm of topographic percussion of the lungs. Topographic parameters of the lungs in normal and in pathology.
27. Percussion examination of the heart - relative cardiac dullness: normal limits and their displacement during changes in the chambers of the heart.
28. Percussion examination of the heart - absolute cardiac dullness: normal limits and their displacement due to cardiac and extracardiac causes.
29. Percussion determination of the vascular bundle, its diagnostic value.
30. Percussion of the liver by the method of Exemplary: the sequence, the parameters are normal and in pathology.
31. Percussion of the liver by the method of Kurlov: the sequence, the parameters are normal and in pathology.
32. Percussion determination of the boundaries of the spleen. Pr Ávila conduct, causes enlargement of the spleen.
33. Auscultation of the lungs - determination of the main respiratory noises, their qualitative and quantitative changes.
34. Auscultation of the lungs - determination of additional respiratory noises, their classification, algorithm for characterizing the auscultatory picture of the lungs
35. Mechanisms of formation and types of rales, their diagnostic value.
36. The main causes of crepitation and noise of pleural friction. Their diagnostic value and methods of differentiation.
37. Rules and sequence of bronchophonia research, its diagnostic value.

38. Auscultation of the heart - heart tones, the mechanism of their formation and changes in strength and timbre.
39. Splitting and bifurcation of heart tones, the concept of accentuation of the second tone.
40. Additional heart tones - quail rhythm and gallop rhythm.
41. Auscultation of heart murmurs: classification and conditions.
42. Auscultation of heart murmurs: sequence of characteristics, differences between organic and functional noises.
43. Diastolic functional noises (Flint, Coombs, Graham-Steele): conditions of occurrence and diagnostic value.
44. Rules of ECG analysis. Criteria for sinus rhythm, heart rate calculation and determination of the position of the electrical axis of the heart.
45. ECG signs of automatic disorders.
46. ECG-signs of excitability disorders. Differentiation of the main types of extrasystoles.
47. ECG – signs of conduction pores . Classification of conduction disorders.
48. ECG signs of atrial fibrillation and flutter. Mechanisms of their occurrence. 49. ECG signs of fibrillation and ventricular fibrillation.

BLOCK № 2:

"Symptoms and syndromes of diseases of the internal organs":

1. Pulmonary compaction syndrome: causes, clinical, laboratory and instrumental methods of diagnosis.
2. Pulmonary airflow syndrome: causes, clinical, laboratory and instrumental methods of diagnosis.
3. Fluid accumulation syndrome in the pleural cavity: causes, clinical, laboratory and instrumental methods of diagnosis.
4. Syndrome of accumulation of air in the pleural cavity: causes, clinical, laboratory and instrumental methods of diagnosis.
5. Bronchial obstruction syndrome: causes, clinical , laboratory and instrumental methods of diagnosis.
6. Heart pain syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
7. Heart failure syndrome: etiology, pathogenesis, classification, clinical, laboratory and instrumental methods of diagnosis.
8. Vascular insufficiency syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
9. Hypertension syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
10. Dyspeptic syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
11. Dysphagic syndrome; etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
12. Types of dyskinesia of the biliary tract: the main clinical manifestations, laboratory and instrumental methods of diagnosis.
13. Portal hypertension syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.

14. Jaundice syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
15. Gastrointestinal bleeding syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
16. Nephrotic syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
17. Urinary syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
18. Acute renal failure syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
19. Chronic renal failure syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
20. Anemic syndrome; etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
21. Hyperplastic syndrome in diseases of the hematopoietic organs: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
22. Hemorrhagic syndromes: classification, pathogenesis, clinical and laboratory methods of diagnosis.
23. Hyperthyroid syndrome: main causes, clinical manifestations, laboratory and instrumental methods of diagnosis.
24. Hypothyroid syndrome: the main causes, clinical manifestations, laboratory and instrumental methods of diagnosis.
25. Bronchitis: classification, main clinical manifestations, diagnosis.
26. Bronchiectasis : classification, main clinical manifestations, diagnosis.
27. Bronchial asthma: classification, main clinical manifestations, diagnosis.
28. Pulmonary emphysema: symptoms, diagnosis.
29. Hospital and outpatient pneumonia: classification, main clinical manifestations , diagnosis.
30. Dry and exudative pleurisy: symptoms, diagnosis.
31. Lung cancer: basic clinical forms, symptoms, diagnosis.
32. Mitral heart defects: the main clinical manifestations, diagnosis.
33. Aortic heart defects: the main clinical manifestations, diagnosis .
34. Ischemic heart disease: the main clinical manifestations and diagnosis of angina.
35. Ischemic heart disease: the main clinical manifestations and diagnosis of acute myocardial infarction.
36. Hypertensive disease: modern classification, clinical manifestations, diagnosis.
37. Symptomatic hypertension: classification; physical, instrumental and laboratory examination data, which allow to suspect secondary arterial hypertension.
38. Chronic gastritis: classification, main clinical manifestations, diagnosis.
39. Peptic ulcer of the stomach and duodenum: classification, main clinical manifestations, diagnosis.
40. Chronic cholecystitis and cholangitis: classification, main clinical manifestations, diagnosis.
41. Gallstone disease: stages of development, symptoms, diagnosis.
42. Hepatitis: basic clinical manifestations, diagnosis.
43. Cirrhosis of the liver: the main clinical manifestations, diagnosis.
44. Acute and chronic glomerulonephritis: main clinical manifestations, diagnosis.

45. Acute and chronic pyelonephritis: main clinical manifestations, diagnosis.
46. Anemia: classification, basic syndromes.
47. Iron deficiency anemia: pathogenesis, clinical manifestations, laboratory criteria.
48. In ₁₂ . folate deficiency anemia: pathogenesis, clinical manifestations, laboratory criteria.
49. Hemolytic anemia: classification, basic syndromes, laboratory criteria.
50. Hemophilia: classification, main clinical manifestations, laboratory diagnosis.
51. Thrombocytopenic purpura: main clinical manifestations, laboratory diagnosis.
52. Hemorrhagic vasculitis (both Shenlein-Genoch patients): main clinical manifestations, laboratory diagnosis.
53. Diabetes mellitus: classification, main symptoms and syndromes, laboratory diagnosis.

Individual tasks

At the request of the student during the study of relevant topics, he can perform individual work, which is carried out in extracurricular activities and if it is successfully completed, it is additionally evaluated by the teacher.

The list and content of individual tasks can be determined in each case depending on the logistics of the departments. Approximate list of individual tasks:

1. Carrying out interrogation of the indicative patient, his general inspection and inspection of the head, neck, extremities with allocation of the main symptoms and syndromes of the disease.
2. Carrying out of researches of function of external respiration at indicative patients, processing of the received data and the report at employment
3. ECG registration, participation in instrumental studies of the cardiovascular system in demonstrative patients with data processing and report on the lesson
4. Carrying out of physical and instrumental inspection of the demonstrative patient with preparation of the review of scientific literature concerning the investigated case
5. Work with literature and other sources of information and preparation of the abstract report on modern methods of examination of patients in the clinic of internal diseases
6. Work with literature and other sources of information and preparation of the abstract report on features of syndromic diagnosis of the disease with a typical course

Typical test problems to be solved in practical classes:

1. Morning cough occurs when:
 - A) Bronchiectasis.
 - B) Laryngitis.
 - C) Pneumonia.
 - D) Dry pleurisy.
 - E) Lung cancer.

2. Enlargement of one of the halves of the chest occurs when:
 - A) Development of pleural adhesions or complete fusion of the pleural fissure.

- B) Exudative pleurisy.
- C) Pneumosclerosis.
- D) Bronchitis.
- E) Bronchopneumonia.

3. Physiological shortness of breath occurs when:

- a) lobar pneumonia;
- b) diseases of the cardiovascular system;
- c) diseases of the hematopoietic system;
- d) increased physical activity.

4. At inspection the doctor found a keel-shaped thorax, at a palpation - "rosaries". The specified form of a thorax can be at:

- a) emphysema of the lungs;
- b) in severely exhausted people;
- c) in patients with rickets .

4.4. Ensuring the educational process

1. Multimedia projectors, computers, screens for multimedia presentations, lecture presentations.
2. Demonstration screens, laptops, files in Power Point and Word with tasks "Step-1" for practical and final classes.
3. Exam tickets.

When studying the discipline, all types of teaching methods recommended for higher education are used, namely:

- by sources of knowledge: verbal (explanation, lecture, conversation, discussion); visual (demonstration); practical (practical work, mastering practical skills), on which special emphasis is placed on the study of the discipline;
- by the logic of the educational process: analytical (selection of individual symptoms of the disease), synthetic (clarification of the relationship of symptoms and selection of disease syndromes), their combination - analytical-synthetic, as well as inductive method (mainly in the study of block 1), deductive when studying block 2), their combination is a translational method (when studying both modules);
- by the level of independent mental activity: problem, partial-search, research.

Combining and summarizing the above teaching methods, when studying the discipline it is advisable to implement such methods of organizing training sessions as: -method of clinical cases,

- problem-research method,
- method of individual educational and research tasks ,
- method of competing groups,
- method of training technologies,
- method of conducting scientific conferences with the use of interactive, interdisciplinary and information and computer technologies

Types of student's educational activities, according to the curriculum, are lectures, practical classes, independent work of students.

Lecture and practical stages of students' learning are formed in such a sequence, if possible, that the topics of lectures precede practical classes.

Practical classes lasting 2 academic hours (80 minutes) are held in a therapeutic clinic (therapeutic department) and consist of four structural parts:

- 1) mastering the theoretical part of the topic,
- 2) demonstration by the teacher of methods of research of the thematic patient,
- 3) the work of students to practice practical skills at the patient's bedside under the supervision of a teacher,
- 4) solving situational problems and test-control of mastering the material.

When conducting practical classes, the main place is occupied by mastering practical skills in physical examination of the patient and working directly with patients.

On the basis of mastering clinical methods of examination of the patient, the ability to synthesize and interpret, evaluate and analyze them, the student develops clinical thinking and skills of establishing a syndromic diagnosis, which is the main task of propaedeutic therapy.

Independent work of students occupies an important place in the study of the discipline. In addition to traditional pre-classroom training on theoretical issues of propaedeutics of internal medicine, it includes work of students in the departments of therapeutic hospitals, clinical laboratories and departments of functional diagnostics in extracurricular time, the effectiveness of which should be ensured by teachers and support staff of the Department of Propaedeutics of Internal Medicine. Independent work includes curation of patients with writing a medical history, which involves questioning and complete physical examination of the patient to determine the leading syndromes, the appointment of diagnostic manipulations and participation in the algorithm of medical care for this patient.

5. Final control

List of final control (exam) questions

The list of questions to master the block № 1 "Basic methods of examination of patients in the clinic of internal medicine":

1. Basic methods of diagnosis of internal diseases.
2. The scheme of questioning the subject. The main structural parts of the anamnesis.
3. The sequence of the general examination of the patient.
4. Types of physique and their main criteria.
5. The sequence of palpation of lymph nodes and the characteristics of the data.
6. Rules of examination of the head and neck.
7. The sequence of examination of the torso and limbs.
8. Static examination of the chest, the diagnostic value of the main symptoms.
9. Dynamic examination of the chest, diagnostic significance of the main symptoms.
10. Examination of the atrial area, the diagnostic value of the main symptoms.
11. The sequence of examination of the abdomen, the definition of the main symptoms.
12. The main properties of the pulse, rules and sequence of their definition.

13. Rules for measuring blood pressure. Determination of systolic and diastolic pressure by the method of Korotkov, calculation of pulse, mean dynamic pressure.
14. Palpation of the chest: the sequence, the clinical significance of the main symptoms.
15. Palpation of the atrial area, determination of the clinical significance of the symptoms found.
16. Superficial palpation of the abdomen: an algorithm for conducting and analyzing the data.
17. Theoretical principles and principles of deep methodical sliding palpation of the abdomen by the method of Obratsov-Strazhesk.
18. Palpation of the sigmoid, cecum, terminal ileum, their properties are normal.
19. Rules of palpation of the ascending and descending colon, their properties are normal.
20. Methods for determining the lower limit of the stomach.
21. Palpation of the transverse colon, the main properties.
22. Rules of palpation of the liver, the diagnostic value of the main symptoms.
23. Palpation of the spleen.
24. Methods for determining the presence of fluid in the abdominal cavity no.
25. The sequence of comparative percussion of the lungs. Basic percussion tones and the mechanism of their formation.
26. Algorithm of topographic percussion of the lungs. Topographic parameters of the lungs in normal and in pathology.
27. Percussion examination of the heart - relatively dull cardiac dullness: normal limits and their displacement with changes in the chambers of the heart.
28. Percussion examination of the heart - absolute cardiac dullness: normal limits and their displacement due to cardiac and extracardiac causes.
29. Percussion determination of the vascular bundle, its diagnostic value.
30. Percussion of the liver by the method of Exemplary: the sequence, the parameters are normal and in pathology.
31. Percussion of the liver by the method of Kurlov: the sequence, normal parameters and pathology.
32. Percussion determination of the boundaries of the spleen. Rules of carrying out, the reasons of increase in a spleen.
33. Auscultation of the lungs - determination of the main respiratory noises, their qualitative and quantitative changes.
34. Auscultation of the lungs - determination of additional respiratory noises, their classification, algorithm for characterizing the auscultatory picture of the lungs
35. Mechanisms of formation and types of rales, their diagnostic value.
36. The main causes of crepitation and noise of pleural friction. Their diagnostic value and methods of differentiation.
37. Human silt and consistency study bronhofonii, its diagnostic value.
38. Auscultation of the heart - heart tones, the mechanism of their formation and changes in strength and timbre.
39. Splitting and bifurcation of heart tones, the concept of accentuation of the second tone.
40. Additional heart tones - quail rhythm and gallop rhythm.
41. Auscultation of heart murmurs: classification and conditions.
42. Auscultation of heart murmurs: sequence of characteristics, differences between organic and functional noises.

43. Diastolic functional noises (Flint, Coombs, Graham-Steele): conditions of occurrence and diagnostic value.
44. Rules of ECG analysis. Criteria for sinus rhythm, heart rate calculation and determination of the position of the electrical axis of the heart.
45. ECG signs of automatic disorders.
46. ECG signs of impaired mobility. Differentiation of the main types of extrasystoles.
47. ECG signs of conduction disorders. Classification of conduction disorders.
48. ECG signs of atrial fibrillation and flutter. Mechanisms of their occurrence.
49. ECG signs of fibrillation and ventricular fibrillation.

The list of questions to master the block № 2 "Symptoms and syndromes of diseases of the internal organs":

54. Syndrome of pulmonary tissue compaction: causes, clinical, laboratory and instrumental methods of diagnosis.
55. Pulmonary airflow syndrome: causes, clinical, laboratory and instrumental methods of diagnosis.
56. Syndrome of accumulation of fluid in the pleural cavity: causes, clinical, laboratory and instrumental methods of diagnosis.
57. Syndrome of accumulation of air in the pleural cavity: causes, clinical, laboratory and instrumental methods of diagnosis.
58. Bronchial obstruction syndrome: causes, clinical, laboratory and instrumental methods of diagnosis.
59. Heart pain syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
60. Heart failure syndrome: etiology, pathogenesis, classification, clinical, laboratory and instrumental methods of diagnosis.
61. Vascular insufficiency syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
62. Hypertension syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
63. Dyspeptic syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
64. Dysphagic syndrome; etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
65. Types of dyskinesia of the biliary tract: the main clinical manifestations, laboratory and instrumental methods of diagnosis.
66. Portal hypertension syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
67. Jaundice syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
68. Syndrome of gastrointestinal bleeding: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
69. Nephrotic syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
70. Urinary syndrome: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.

71. Syndrome of acute renal failure: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
72. Chronic renal failure syndrome: etiology, pathogenesis, clinical , laboratory and instrumental methods of diagnosis.
73. Anemic syndrome; etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
74. Hyperplastic syndrome in diseases of the hematopoietic organs: etiology, pathogenesis, clinical, laboratory and instrumental methods of diagnosis.
75. Hemorrhagic syndromes: classification, pathogenesis, clinical and laboratory methods of diagnosis.
76. Hyperthyroid syndrome: the main causes, clinical manifestations, laboratory and instrumental methods of diagnosis.
77. Hypothyroidism : the main causes, clinical manifestations, laboratory and instrumental methods of diagnosis.
78. Bronchitis: classification, main clinical manifestations, diagnosis.
79. Bronchiectasis: classification, main clinical manifestations, diagnosis.
80. Bronchial asthma: classification, main clinical manifestations, diagnosis.
81. Emphysema of the lungs: symptoms, diagnosis.
82. Hospital and outpatient pneumonia: classification, main clinical manifestations, diagnosis.
83. Dry and exudative pleurisy: symptoms , diagnosis.
84. Lung cancer: basic clinical forms, symptoms, diagnosis.
85. Mitral heart defects: the main clinical manifestations, diagnosis.
86. Aortic heart defects: the main clinical manifestations, diagnosis.
87. Ischemic heart disease: the main clinical manifestations and diagnosis of angina.
88. Ischemic heart disease: the main clinical manifestations and diagnosis of acute myocardial infarction.
89. Hypertension: modern classification, clinical manifestations, diagnosis.
90. Symptomatic and arterial hypertension: classification; physical, instrumental and laboratory examination data, which allow to suspect secondary arterial hypertension.
91. Chronic gastritis: classification, main clinical manifestations, diagnosis.
92. Peptic ulcer of the stomach and duodenum: classification, main clinical manifestations, diagnosis.
93. Chronic cholecystitis and cholangitis: classification, main clinical manifestations, diagnosis.
94. Gallstone disease: stages of development, symptoms, diagnosis.
95. Hepatitis: the main clinical manifestations, diagnosis.
96. Cirrhosis of the liver: the main clinical manifestations, diagnosis.
97. Acute and chronic glomerulonephritis: main clinical manifestations, diagnosis.
98. Acute and chronic pyelonephritis: main clinical manifestations, diagnosis.
99. Anemia: classification, basic syndromes.
100. Iron deficiency anemia: pathogenesis, clinical manifestations, laboratory criteria.
101. In ₁₂ . folate deficiency anemia: pathogenesis, clinical manifestations, laboratory criteria.
102. Hemolytic anemia: classification, basic syndromes, laboratory criteria.
103. Hemophilia : classification, main clinical manifestations, laboratory diagnosis.

104. Thrombocytopenic purpura: the main clinical manifestations, laboratory diagnosis.
105. Hemorrhagic vasculitis (Shenlein-Henoch disease): main clinical manifestations, laboratory diagnosis.
106. Diabetes mellitus: classification, main symptoms and syndromes, laboratory diagnosis.

Sets of practical tasks are formed directly from the list of practical skills that the student must master during the study of each of the two modules of the discipline, which are standardized by the method of practical work.

**The list of practical skills that a student must learn while studying block № 1
"Basic methods of examination of patients in the clinic of internal
medicine":**

1. To interrogate the patient. Make a conclusion about the obtained anamnestic data. Identify the main symptoms and syndromes.
2. Conduct a general examination of the indicative patient. Identify the leading symptoms.
3. Examine the head and neck of a demonstrative patient. Determine the clinical significance of the symptoms.
4. Examine the torso and limbs of the patient. Determine the clinical significance of symptoms.
5. Examine the chest of a patient with broncho-pulmonary pathology, assess static and dynamic signs.
6. Conduct a review of the re dsertsevoyi plots to determine the clinical significance of symptoms.
7. Examine the abdomen, determine the clinical significance of symptoms.
8. Conduct a palpation of the chest to determine the clinical significance of symptoms.
9. Conduct a palpation of the lymph nodes, evaluate the results.
10. Conduct a palpation examination of the thyroid gland, evaluate the data obtained.
11. Conduct a palpation of the pulse, determine the clinical significance of symptoms.
12. Conduct a palpation of the atrial area, to determine the clinical significance of symptoms.
13. Conduct a superficial palpation of the abdomen, determine the clinical significance of symptoms.
14. Conduct a palpation of the sigmoid colon, determine the clinical significance of symptoms.
15. Conduct a palpation of the cecum, determine the clinical significance of symptoms.
16. Conduct a palpation of the ascending colon to determine the clinical significance of symptoms.
17. Conduct a palpation of the descending part of the colon, to determine the clinical significance of symptoms.
18. Conduct a palpation of the transverse colon, determine the clinical significance of symptoms.
19. Conduct a palpation of the liver, determine the clinical significance of symptoms.
20. To carry out palpatory research of a spleen, to define diagnostic value of symptoms.

21. Conduct palpation and percussion examination of the kidneys, determine the diagnostic value of symptoms.
22. Determine the lower limit of the stomach, evaluate the data obtained.
23. To determine the presence of fluid in the abdominal cavity, to give a clinical assessment.
24. Measure blood pressure in the upper extremities, evaluate the data obtained.
25. Carry out measurement of arterial pressure on the lower extremities, to estimate the received yes no.
26. Carry out a comparative percussion of the lungs and determine the clinical significance of symptoms.
27. Carry out topographic percussion of the lungs and determine the diagnostic value of symptoms.
28. Conduct a percussion examination of the heart, determine the limits of relative dullness of the heart, give a clinical assessment.
29. Conduct a percussion examination of the heart, determine the limits of absolute dullness of the heart, give a clinical assessment.
30. Percussion method to determine the boundaries of the liver, to assess the diagnostic value of symptoms.
31. Percussion method to determine the boundaries of the spleen, to give a clinical assessment.
32. Carry out auscultation of the lungs, determine the quantitative and qualitative changes in respiration, give a clinical assessment.
33. To carry out auscultation of lungs, to define additional respiratory noises, to give a clinical assessment.
34. Conduct a study of bronchophonia, give a clinical assessment.
35. Pr ovesty auscultation of the arteries, to determine the diagnostic value of symptoms.
36. Carry out auscultation of the heart, determine changes in its tones, give a clinical assessment.
37. Carry out auscultation of the heart, determine the diagnostic value of heart murmurs.
38. To analyze the ECG of a patient with impaired automaticity of the heart.
39. Analyze the ECG of a patient with impaired cardiac excitability. Carry out differential diagnosis of extrasystoles.
40. Analyze the ECG of a patient with impaired cardiac conduction.
41. Analyze the ECG of a patient with a combined violation of the excitability and conduction of the heart.
42. Analyze the FCG of a patient with heart disease.

**The list of practical skills that the student must learn when studying block № 2
"Symptoms and syndromes of diseases of the internal organs":**

1. Conduct a physical examination of a patient with mitral heart disease. Identify the leading symptoms and syndromes.
2. Conduct a physical examination of a patient with aortic heart disease. Identify the leading symptoms and syndromes.
3. Conduct a physical examination of a patient with hypertension. Identify the leading symptoms and syndromes.

4. To interrogate a patient with coronary heart disease (stable angina pectoris), to detail the pain syndrome, to determine the functional class of the patient.
5. Conduct a general examination and physical examination of a patient with acute myocardial infarction. Identify the main symptoms and syndromes.
6. Evaluate the ECG of a patient with acute myocardial infarction, determine the nature and location of heart muscle damage.
7. Conduct a physical examination of a patient with heart failure. Identify the main symptoms and syndromes, establish the functional class of the patient.
8. To interrogate and examine a patient with obstructive pulmonary disease. Identify the main symptoms and syndromes, taking into account the data of spirometry to establish the stage of the disease.
9. Conduct palpation, chest percussion and lung auscultation in a patient with obstructive pulmonary disease. Identify the main symptoms and syndromes.
10. Conduct an interrogation and physical examination of a patient with pneumonia. Identify the main symptoms and syndromes.
11. To interrogate and physically examine a patient with pleurisy. Determine the nature of pleurisy, the main symptoms and syndromes.
12. Conduct questioning, examination and palpation of the abdomen in a patient with chronic gastritis. Identify the leading syndromes .
13. Analyze the results of intragastric pH-metry in a patient with chronic gastritis. Assess the acid-forming function of the stomach.
14. Carry out questioning, examination and palpation of the abdomen in a patient with peptic ulcer of the stomach / duodenum. Identify the main syndromes , recognize the possible location of the ulcer.
15. Conduct questioning, examination and palpation of the abdomen in a patient with chronic cholecystitis. Check the main symptoms characteristic of gallbladder damage. Identify the main syndromes.
16. Conduct questioning, examination and palpation of the abdomen in a patient with chronic cholangitis. Identify the main syndromes.
17. Evaluate the data of multi-moment duodenal sounding of a patient with biliary tract disease. Identify the main symptoms and location of the lesion.
18. Conduct questioning and examination of a patient with hepatitis (or cirrhosis of the liver). Identify the main symptoms and syndromes.
19. Conduct a physical examination of a patient with hepatitis (or cirrhosis of the liver). Identify the main syndromes based on biochemical blood tests and urine tests.
20. Conduct a physical examination of a patient with kidney disease (pyelonephritis or glomerulonephritis). Identify the main syndromes.
21. To analyze the general clinical analysis of urine of a patient with kidney disease, analysis of urine by the methods of Zymnitsky and Nechiporenko. Identify the main symptoms and syndromes. To draw a conclusion about the nature of kidney damage.
22. Conduct a physical examination of a patient with anemia. Identify the main symptoms and syndromes, taking into account the general blood test to determine the nature of anemia.
23. Conduct questioning and general examination of a patient with diabetes, examine the pulse in the vessels of the upper and lower extremities, measure blood pressure. Identify the main symptoms and syndromes.

"0" version of the exam ticket

Petro Mohyla Black Sea National University

Level of higher education - master

Field of knowledge: 22 Healthcare Specialty 222

Medicine

Course - PROPEDEUTICS OF INTERNAL MEDICINE

Option № 0

1. History of development of propaedeutics of internal medicine in Ukraine - **the maximum number of points - 20.**
2. Bronchial obstruction syndrome: causes, clinical, laboratory and instrumental methods of diagnosis - **maximum number of points - 20.**
3. Practical skill : method of topographic and comparative percussion of the lungs - **maximum number of points - 20.**
4. Situational task: A 60-year-old patient suffering from hypertension for 20 years suddenly had an attack of shortness of breath after a stressful situation. Objectively: orthopedic position , Ps - 120 for 1 min., Blood pressure 210/120 mm Hg. Art. I tone above the apex of the heart is weakened, in diastole an additional tone is heard, BH - 32 / min Breathing over the lower lungs is weakened, isolated inaudible wet small-bubble rales. What is the previous diagnosis? Etiology and pathogenesis of this pathology. What research methods will you prescribe to the patient to clarify the diagnosis? - **maximum number of points - 20.**

Approved at the meeting of the Department of Therapeutic and Surgical Disciplines ", minutes № ____ from" __ " _____ 2020.

Head of the Department Professor Zak

Examiner Professor Zak M.Yu.

An example of the final control work on block 1

Solving problems Step-1

1. After determining the lower limit of the right lung, the doctor found that it is on all topographic lines 2 cm above normal. What disease should a doctor think about?
A - left exudative pleurisy
B - right exudative pleurisy
C - focal pneumonia
D - chronic bronchitis
E - partial pneumonia
2. After determining the lower limit of the right lung, the doctor found that it is on all topographic lines 2 cm above normal. What additional research needs to be conducted?

- A - Ren tgenological
- In - Bronchophonia
- C - Bronchography
- D - Biopsy
- E - radioscopy

3. At percussion of a thorax the doctor found a dulling of a pulmonary sound on the left. The upper limit of this blunting has the form of a parabolic line with a top on a back axilla and a line. Palpation of voice tremor is not detected. What pathological process should a doctor think about? A - left exudative pleurisy

- In - right exudative pleurisy
- C - focal pneumonia
- D - chronic bronchitis
- E - partial pneumonia

And so 30 problems with the subsequent analysis of typical errors.

An example of the final control work on block 2

Solving problems Step-2

1. Performing auscultation of the heart, the doctor placed a stethoscope at the apex of the heart, then - in the 2nd intercostal space to the right of the sternum, then - in the 2nd intercostal space to the left of the sternum, then - at the base of the xiphoid process, then - to the left of the sternum. at the site of attachment of 3 and 4 costal cartilages to the sternum. Which valve did the doctor listen to first? A. Aortic valve.
 - B. Mitral valve.
 - C. Tricuspid valve.
 - D. Pulmonary artery valve.
 - E. Mitral and tricuspid.

2. Performing auscultation of the heart, the doctor placed a stethoscope at the apex of the heart, then - in the 2nd intercostal space to the right of the sternum, then - in the 2nd intercostal space to the left of the sternum, then - at the base of the xiphoid process, then - to the left of the sternum. at the site of attachment of 3 and 4 costal cartilages to the sternum. Which valve did the doctor listen to at the second auscultation point? A. Aortic valve.
 - B. Mitral valve.
 - C. Tricuspid valve.
 - D. Pulmonary artery valve.
 - E. Mitral and tricuspid.

3. Performing auscultation of the heart, the doctor placed a stethoscope at the apex of the heart, then - in the 2nd intercostal space to the right of the sternum, then - in the 2nd intercostal space to the left of the sternum, then - at the base of the xiphoid process, then - to the left of the sternum. places of attachment of 3 and 4 costal cartilages to gr udina. Which valve did the doctor listen to at the third point of auscultation? A. Aortic valve.
 - B. Mitral valve.

- C. Tricuspid valve.
 - D. Pulmonary artery valve.
 - E. Mitral and tricuspid.
4. Performing auscultation of the heart, the doctor placed a stethoscope in the top of the heart, then - in the 2nd intercostal space to the right of the sternum, then - in the 2nd intercostal space to the left of the sternum, then - at the base of the xiphoid process, then - to the left of the sternum in the place of attachment of 3 and 4 costal cartilages to a sternum. Which valve did the doctor listen to last? A. Aortic valve.
- B. Mitral valve.
 - C. Tricuspid valve.
 - D. Pulmonary artery valve.
 - E. Mitral and tricuspid.

And so 30 problems with the subsequent analysis of typical errors.

6. Evaluation criteria and tools for diagnosing learning outcomes

Teaching methods:

- a) lectures,
- b) practical classes,
- c) independent work of students,
- d) consultations.

Thematic plans of lectures, practical classes and VTS reveal the problematic issues of the relevant sections of propaedeutics of internal medicine. Didactic tools (multimedia presentations, slides, educational films, demonstration of thematic patients) are used as much as possible in the lecture course . Lecture and practical stages of student learning are composed mainly in such a way that the lectures are preceded by appropriate practical classes and the rotation of thematic sections, read in one block.

Practical classes are conducted on the clinical basis of the department. The method of organizing practical classes on propaedeutics of internal medicine involves the need to:

- to make the student a participant in the process of providing medical care to patients from the moment of their hospitalization, examination, diagnosis, treatment to discharge from the hospital;
- to master professional practical skills; skills of teamwork of students, doctors, other participants in the process of providing medical care;
- to form in the student, as in the future specialist, an understanding of responsibility for the level of their training, its improvement during training and professional activities.

To implement this, it is necessary at the first lesson of the relevant section to provide the student with a detailed plan of work in the clinic and provide conditions for its implementation.

This plan should include:

- research that the student must master (or get acquainted with);
- algorithms (protocols) of examinations, diagnosis, treatment, prevention in accordance with the standards of evidence-based medicine;
- supervision of patients to be carried out by the student during the course;

- reports of the patient's medical history in the study group, at clinical rounds, practical conferences.

Patient supervision involves:

- 1) clarification of the patient's complaints, anamnesis of disease and life, conducting a survey of organs and systems;
- 2) conducting a physical examination of the patient and determining the main symptoms of the disease;
- 3) analysis of laboratory and instrumental examination data;
- 4) formulation of the diagnosis;
- 5) appointment of treatment;
- 6) determination of primary and secondary prevention measures;
- 7) report on the results of examination of the patient by a team of students in the study group, analysis under the guidance of the teacher of the correctness of diagnosis, differential diagnosis, scheduled examination, treatment tactics, assessment of prognosis and performance, prevention.

In practical classes, students are encouraged to keep protocols, which must include brief information about the patients examined during the practical lesson, diagnosis, examination plan and prescribed treatment.

VTS and individual work of students is 30-56% in the curriculum. It includes:

- ✓ pre-classroom and extracurricular training of students on the course of the discipline;
- ✓ work of students in departments on the clinical base of the department, including laboratories and departments (offices) of functional diagnostics, interpretation of data of laboratory and instrumental research methods in internal pathology in extracurricular time;
- ✓ acquisition of practical skills through work with patients;
- ✓ individual VTS (speech at the scientific-practical conference of the clinic, writing articles, report of the abstract at the practical lesson, participation in the work of the student group, competitions in the discipline , etc.);
- ✓ work in a computer class in preparation for the Step-2 exam; ✓ elaboration of topics that are not included in the classroom plan.

Teachers of the department provide the opportunity to carry out VTS during practical classes and monitor and evaluate its implementation. Topics submitted for self-study are evaluated during the final control.

Control methods

Practical classes are held with the inclusion of:

- 1) control of the initial level of knowledge with the help of tests;
- 2) survey of students on the topic of the lesson ;
- 3) management of 1-2 patients with diseases and conditions corresponding to the subject of the lesson, followed by discussion of the correctness of diagnosis, differential diagnosis and treatment with the use of evidence-based medicine and in accordance with National and European guidelines and protocols;
- 4) consideration of the results of additional research methods (laboratory and instrumental), which are used in the diagnosis and differential diagnosis, consideration of which is provided by the topic of practical training;

5) control of the final level of knowledge for test tasks, compiled in the format of Step-2.

Assimilation of the topic (**current control**) is controlled in a practical lesson in accordance with specific goals, assimilation of semantic sections - in practical final lessons. The following means of assessing the level of student training are used: computer tests, solving situational problems, conducting laboratory research and interpretation and evaluation of their results, analysis and evaluation of instrumental research results and parameters that characterize the functions of the human body , control the acquisition of practical skills .

The current control is carried out by the teacher of the academic group after the students have mastered each topic of the discipline and grades are given using the 200-point scale of the university, which corresponds to the 200-point scale of ECTS.

Final lesson (SO) - is conducted after the logically completed part of the discipline, consisting of a set of educational elements of the work program, which combines all types of training (theoretical, practical, etc.), elements of educational and professional program (academic discipline, all types of practices). certification), which are implemented by appropriate forms of the educational process. The department provides information for preparation for the software on the information stand and on the website of the department the following materials:

- basic and anchor test tasks of LII "Step-2";
- list of theoretical questions (including questions on independent work);
- list of practical skills;
- a list of drugs, prescriptions of which must be prescribed by the student;
- list of medical records;
- criteria for assessing the knowledge and skills of students;
- schedule of students completing missed classes during the semester. **Conducting the final lesson:**

1. Solving a package of test tasks on the content of educational material, which includes the following:

- basic test tasks in the discipline, which cover the content of the study material of the final lesson in the amount of **30 tests** that correspond to the database "Step-2". Evaluation criterion - **70.0% of** correctly solved tasks; "Passed" or "did not pass");

1. Assessment of the development of practical skills (assessment criteria - " performed" or "failed").

2. During the assessment of the student's knowledge on theoretical issues, as well as questions for independent work included in this final lesson, the student is given a grade on a multi-point scale, as well as a grade for current learning activities (PND) .

3. Tasks for practical and professional training that reflect the skills and abilities during the supervision of thematic patients, evaluation of laboratory and instrumental research methods and the choice of treatment tactics, which are defined in the above list of this work program.

4. Tasks for diagnosis and care in emergencies.

The final lesson is accepted by the teacher of the academic group. Forms of software are standardized and include control of all types of training (theoretical, practical, independent, etc.), solving test tasks "Step-2", provided by this work program. At the beginning of the lesson students solve test tasks "Step-2" in the amount of 30 tasks, then at the patient's bedside the group teacher takes practical skills, which are assessed "performed", "failed", then students write written work, each ticket contains 5 theoretical questions, which

include questions submitted for independent work, followed by an oral interview with the student, after which a grade is given for the software.

The final semester control is carried out after the completion of the study of the discipline in the form of a final control work (PKR).

PKR is conducted by the teacher of the academic group at the last lesson. Students who have scored at least 70 points in the autumn semester and 40 points in the spring semester are admitted to the RCC. The maximum score in the autumn semester is 120, in the spring - 80. At the RCC in the autumn semester, a student can get from 50 to 80 points, in the spring - from 30 to 40 (see table below).

Assessment of individual student tasks. The meeting of the department approved a list of individual tasks (participation with reports in student conferences, profile competitions, preparation of analytical reviews with presentations with plagiarism) and determined the number of points for their implementation, which can be added as incentives (**not more than 10**). Points for individual tasks are accrued to the student once only as a commission (commission - head of the department, head teacher, group teacher) only if they are successfully completed and defended. In no case may the total amount of points for IPA exceed 120 points.

Assessment of students' independent work. Assimilation of topics that are submitted only for independent work is checked during the final classes and final tests.

In order to assess the learning outcomes of the entire discipline, the **final control** is conducted **in the form of an exam, which is recommended for academic disciplines, which is part of the integrated test exams EDKI and "Step-2"**. Only students who have passed both final tests (according to blocks 1 and 2) in the discipline are admitted to the exam.

Exam of the discipline "Propaedeutics of Internal Medicine" is a process during which the results obtained for the 3rd year are checked:

- level of theoretical knowledge;
- development of creative thinking;
- skills of independent work;
- competencies - the ability to synthesize the acquired knowledge and apply them in solving practical problems.

The department provides the following materials for preparation for the exam on the information stand and on the website of the department:

- basic and anchor test tasks "Step-2";
- list of theoretical questions (including questions on independent work); - list of practical skills;
- a list of drugs, prescriptions of which must be prescribed by the student;
- criteria for assessing the knowledge and skills of students;
- schedule of students completing missed classes during the semester. **Conducting an exam.**

1. Assessment of theoretical knowledge on the tickets drawn up at the department, which contain two theoretical questions from the sections of the discipline, which were studied during the academic year.

2. Assessment of practical skills acquisition.

3. Evaluation of the solution of the situational problem.

Distribution of points in the assessment - see above in the example of the exam ticket. The maximum score on the exam is 80 points, the exam is considered passed if at least 50 points are scored (see the table below).

Distribution of points received by students

As mentioned above, each block (semester) uses a 200-point scale.

In the first block (in the autumn semester) on the current control the maximum sum of points makes 120, the minimum - 70.

This semester there are 23 practical classes (46 academic hours).

Current control is carried out in 22 practical classes.

Accordingly, the **maximum score for each current practical lesson** is: 120 points: 22 lessons = **5.5 points**. The **minimum score** is 70 points: 22 lessons = **3.2 points**.

A score lower than 3.2 points means "unsatisfactory", the class is not credited and must be practiced in the prescribed manner.

Final control (RCC) is carried out at the last, 23rd, practical lesson. For PKR in block 1, a student can get a maximum of 80 points. PKR is considered credited if the student scored at least 50 points.

In the second block (in the spring semester), on the current control the maximum sum of points makes 80, the minimum - 40.

This semester 12 practical classes (24 academic hours).

Current control is carried out in 11 practical classes.

That is, the **maximum score for each current practical lesson** is: 80 points: 11 lessons = **7.3 points**, the **minimum** - 40 points: 11 lessons = **3.6 points**.

A score lower than 3.6 points means "unsatisfactory", the lesson is not credited and must be practiced in the prescribed manner.

PKR on block 2 is carried out on the last, 12th, practical employment. In this case, the student can get a maximum of 40 points. The minimum positive score is 30 points. At the exam, the maximum positive grade is 80 points, the minimum - 50.

Assessment of student performance

Type of activity (task)	Maximum number of points
Block 1	
Practical classes from 1 to 22	5.5 points for each lesson
A total of 22 lessons	120
Final control work on block 1 (practical lesson 23)	80
Together for block 1	200
Block 2	
Practical classes from 1 to 11	7.3 points for each lesson
Total for 11 classes	80
Final control work on block 2 (practical lesson 12)	40
Together for block 2	120
Examination	80
Together for block 2 and the exam	200

Criteria for assessing knowledge

With a score of 5.5 points in the autumn semester (7.3 points in the spring semester), 71-80 points on the RCC in the autumn semester (38-40 points in the spring semester) and

71-80 points on the exam (A on the ECTS scale and 5 on a national scale) **the student's response is evaluated if he demonstrates a deep knowledge of all theoretical principles and the ability to apply theoretical material for practical analysis and has no inaccuracies.**

Score 4-4.5 points in the fall semester (5-6 points in the spring semester), 61-70 points on the RCC in the fall semester (35-37 points on the RCC in the spring semester) and 61-70 points on the exam and C on the ECTS scale and 4 on the national scale) the **answer is evaluated if it shows knowledge of all theoretical provisions, the ability to apply them in practice, but some fundamental inaccuracies are allowed .**

A score of 3.2 points in the fall semester (3.6 points in the spring semester), 50-60 points on the RCC in the fall semester (30-34 points on the RCC in the spring semester) and 50-60 points on the exam (D and E for ECTS scale and 3 on the national scale) **the student's answer is evaluated provided that he knows the main theoretical principles and can use them in practice.**

Literature :

1. Immunology [Text]: a textbook for universities / A.Yu. Vershigora, E.U. Pasteur, D.V. Kolibo, V.K. Pozur. – K .: Higher school, 200 5. – 599p. – Rekom. MES of Ukraine.
2. Electrocardiography [Text]: (for the II-III-year students / reviewer VDSivolap; Zaporozhyye State Medical University. – Zaporozhye, 2006. – 46p.
3. Rudyk , B . And . Selected lectures on cardiology [Text]: textbook . manual for schools / B . And . Rudyk . 2- E type ., Ext . and processing .– Ternopil : Ukramedknyha , 2002. – 369 p .
4. Strazhesko, ND Atlas of clinical hematology [Text]: [guide] / ND Strazhesko, DN Yanovsky. – M .: Medgiz, 1963. – 99p .: XL color. table.
5. Perederiy, VG Fundamentals of internal medicine [Text]: textbook. Vol.1: Diseases of the respiratory system. Diseases of the digestive system. Diseases of the blood system and hematopoietic organs. Diseases of the endocrine system / VG Perederiy, SM Tkach. – Kiev, 2009. – 784p .: ill.
6. Perederiy, VG Fundamentals of internal medicine [Text]: textbook. Vol.2: Diseases of the circulatory system. Rheumatic diseases. Kidney diseases. General issues of internal medicine / VG Perederiy, SM Tkach. – Kiev, 2009. – 976p .: ill.
7. Perederiy, VG Fundamentals of internal medicine [Text]: [textbook]. Vol.1: Respiratory diseases. Digestive diseases. Diseases of the blood system and hematopoietic organs. Diseases of the endocrine system / VG Perederiy, SM Tkach. – Vinnytsia: Nova Kniga, 2009. – 640p .: ill.
8. Perederiy, VG Fundamentals of internal medicine [Text]: [textbook]. Vol.2: Diseases of the circulatory system. Rheumatic diseases .. Kidney disease. General issues of internal medicine / VG Perederiy, SM Tkach. – Vinnytsia: Nova Kniga, 2009. – 784p .: ill.
9. Perederiy, VG Fundamentals of internal medicine [Text]: [textbook]. Vol.3: Differential diagnosis and management of patients in the clinic of internal medicine. Acute and urgent conditions in the clinic of internal medicine / VG Perederiy, SM Tkach. – Vinnytsia: Nova Kniga, 2010. – 1006p .: ill.
10. Babinets, LS Diseases of the respiratory system in family medicine [Text]: textbook. way. / LS Babinets, IOBorvik, LV Andriuk. – Kyiv: Medicine, 2019. – 312p .: 2p. color. incl.
11. Bronchial asthma [Text]: textbook. manual for doctors and students / prepared by: SN Polivoda, YM Kolesnik, TZ Kudintseva. – Zaporozhye: ZSMU Publishing House, 2000. – 94p.

12. A brief guide to the treatment and prevention of asthma [Text]: a guide for physicians and nurses. – NISLK / WHO, 1998. – 28p.
13. Skachko, BG Tuberculosis: Prevention. Treatment. Rehabilitation [Text] / BG Skachko.–K .: Medicine, 2006. – 120p.
14. Diseases of the endocrine system: definitions, classifications, diagnostic criteria [Text]: [textbook. allowance] / compiled by: VDSyvolap, VGKadzharyan, AOSolovyuk. – Zaporozhye: ZSMU Publishing House, 2009. – 69p.
15. Burchinsky, GI Ulcer disease [Text]: [monograph] / GIBurchinsky, VE Kushnir. – 2nd ed. corrected. and add. – K .: Health, 1973. – 211p .– (Library of a general practitioner).
16. Clinical laboratory and instrumental diagnostics in gastroenterology [Text]: textbook. allowance / comp .: VDSyvolap et al. – Zaporozhye: ZSMU Publishing House, 2 000. – 149p.
17. Mukhin, NA Diagnosis and treatment of kidney diseases [Text] / NA Mukhin, IE Tareeva. – Moscow: Medicine, 1985. – 240p .– (Library of a general practitioner).
18. Polishchuk, VP HIV / AIDS and the formation of a healthy lifestyle [Text]: textbook. manual / VP Polishch uk, OV Molchanets, GV Koroteeva. – K., 2008. – 175p. – Rekom. MES of Ukraine.
19. Kovalyova, OM Propedeutics to internal medicine [Text]. part 2: Syndromes and diseases / OMKovalyova, SOShapovalova, OONizhegorodseva. – Vinnytsya: NovaKnyha, 2007. – 264p.
20. Kovaly ova, OM Propedeutics of Internal Medicine [Text] = Propedeutics of Internal Medicine : textbook. Part 1: Diagnostics / OMKovalyova, TVAshcheulova. – 4th edition. – Vinnytsia: Nova Knyha, 2019. – 424p .: il.
21. Murashko, VV Electrocardiography [Text]: textbook. manual for universities / VV Murashko, AV Strutynsky. – 6th ed. – M .: Medpress-inform, 2004. – 320p.
22. Fundamentals of X-ray diagnostic techniques [Text]: textbook. manual for universities / ed. NN Blinova. – M .: Medicine, 2002.– 392p .– (Educational literature for students of medical universities).
23. Propaedeutics of internal medicine [Text]: textbook / [KOBbkovych, MSDzis, VMZhebel, etc.]; for order. MS Rasina. – Vinnytsia: New Book, 2014. – 208p .: ill.