MINISTRY OF EDUCATION AND SCIENCE OF KYRGHYZ REPUBLIC
OSH STATE UNIVERSITY
INTERNATIONAL MEDICAL FACULTY
DEPARTMENT OF CLINICAL DISCIPLINES 1
SUBJECT «INTERNAL DISEASES-1»

"AGREED" at the meeting of the department KD1 Chairman of the EMC, IMF Salieva R. Sh. _____	**"APPROVED"** prot. № ___ _____ 2022 y. head of Dept. Ph. D., associate professor Mamatova S. M. _____

STUDENT TRAINING PROGRAM
(Syllabus)
Discipline: «PROPEDEUTICS OF INTERNAL DISEASES 1»
Specialty: "General Medicine"

Year: 2rd
Semester: 4th
Total: 5 credits
Form of control: Exam
# of modules: 2

Total: 150 hours
Lectures: 30 hours
Practical classes: 45 hours
IWS: 75

Total intracurricular hours: 75
2. Name and code of the discipline:«PROPEDEUTICS OF INTERNAL DISEASES 1»

3. Information about the lecturers and teachers:
Karataeva G.T., PhD, assoc. professor, work experience - 16 years.
Teachers:
Karataeva G.T., PhD, assoc. professor, work experience - 16 years.
Abdraeva F. A. – teacher, work experience - 12 years.
Madraimova V.C.– teacher, work experience - 1 years
Omorova N.T. – teacher, work experience – 1 years
Jenish k A. – teacher, work experience – 3 years
Taalaibek k. A.- teacher, work experience – 1 years
Omorova A.N. - teacher, work experience – 1 years
5. Date: 2022 educational year, semester.

1) Course
PROPEDEUTICS OF INTERNAL DISEASES 1
2) Lectures
3. Information about the lecturers and teachers:
Mamyrova K. K.

Teachers:

Karataeva G.T., PhD, assoc. professor, work experience - 16 years. Every day Medical clinic MEDICANA CLINIC 8.00 to 17.00. Phone 0770431822

Abdraeva F. A. – teacher, work experience - 12 years. Every day Medical clinic on 4 floor room 419 from 8.00 to 17.00. Phone 0550 540085
Madraimova V.C.– teacher, work experience - 1 year. Every day Medical clinic on 4 floor room 411 from 8.00 to 17.00.Phone 0555 634740

Omorova N.T. – teacher, work experience – 1 year. Every day Medical clinic on 4 floor room 407 from 8.00 to 17.00.Phone 0705 266888.

Jenish k A. – teacher, work experience – 3 years. Every day Medical clinic on 4 floor room 410 from 8.00 to 17.00.Phone 0703 404655.

Taalaibek k. A.- teacher, work experience – 1 year. Every day Medical clinic on 4 floor room 410 from 8.00 to 17.00. phone 0704 710840.

Omorova A.N. - teacher, work experience – 1 year. Every day Medical clinic on 4 floor room 411 from 8:00 a.m. till 5:00 p.m., phone: 0776 050603

1**. Objectives of the discipline**

The purpose of teaching the subject "Internal Diseases 1" is the formation of well-educated professionals who know how to examine patients with internal diseases, diagnostic process, symptomatology and general principles of treatment of the most common internal diseases of adults.

2. Discipline Learning Outcomes

As a result of studying the subject "Internal Medicine 1 (4th semester)", the student will achieve the following learning outcomes and will:

Learning outcomes (GEP) Code of the learning outcomes of the general education program and its formulation	**Code and wording of competencies** (Competencies of the general education program)	**Learning outcomes of discipline and its formulation**
LO5 - Able to assess morphofunctional, physiological conditions and pathological processes and apply research methods to sick adults and children to solve professional problems	**PC-5 -** able to conduct and interpret a survey, physical examination, clinical examination, the results of modern laboratory and instrumental studies, write a medical card for an outpatient and inpatient patient of an adult and a child;	**LOd:** **Knows and understands:** - the methodology (technique) of the interpretation of the survey, physical examination and clinical examination of an adult patient with internal diseases (PK-5); - the main methods of modern laboratory and instrumental studies of an adult patient with internal diseases (PK-5); - rules for writing (filling out) a medical record of an outpatient and inpatient patient of an adult with internal diseases (PK-5). **Able to:** - conduct and interpret the survey, physical examination, clinical and laboratory-instrumental examination of an adult patient with internal diseases (PK-5); - fill out a medical record of an outpatient and inpatient patient of an adult with internal diseases (PK-5). - to conduct and interpret the survey, physical examination, clinical and laboratory-instrumental examination of an adult patient with internal diseases (PK-5); - to fill out the medical records of an outpatient and inpatient adult patient with internal diseases (PK-5).
LO 7 – be able to apply basic knowledge in the field of diagnostic activities to solve professional problems	**PC-12 -** be able to analyze the patterns of functioning of individual organs and systems, use the knowledge of the anatomical and physiological features, the main methods of clinical and laboratory examination and assess the functional state of the body of an adult and children, for the timely diagnosis of diseases and pathological processes;	**LOd:** **Knows and understands:** - etiology and pathogenesis, the main methods of clinical laboratory examination and modern laboratory examination methods for the diagnosis of internal diseases of an adult for the timely diagnosis of the most common diseases of internal organs (PC-15); **Able to:** - prescribe to the patient with suspected diseases of the internal organs the necessary clinical, instrumental and laboratory examinations; find typical pathologies as a result of examinations; - to diagnose and differentiate diseases of internal organs in adults; (PK-15). - prescribe and interpret the basic methods of clinical and laboratory examination of an adult for the timely diagnosis of internal diseases (PK-15).

	PC-16- is able to identify the main pathological symptoms and syndromes of diseases in patients, using knowledge of the fundamentals of biomedical and clinical disciplines, taking into account the pathology of organs, systems of the body as a whole, to analyze the patterns of functioning of organs and systems in various diseases and pathological processes, use the diagnosis algorithm (main, concomitant, complications) taking into account the ICD (international classification of diseases) -10, perform basic diagnostic measures to identify urgent and life-threatening conditions;	**Knows and understands:** - the importance of identifying the main pathological symptoms and syndromes of internal diseases in adult patients, clinical and laboratory methods for the diagnosis of emergency and life-threatening conditions (PK-16); - an algorithm for diagnosing internal diseases (underlying, concomitant, complications) taking into account ICD-10 (PC-16). **Able to:** - to identify in adult patients the main pathological symptoms and syndromes of internal diseases (PK-16); - to make a plan for a standard (clinical, laboratory, instrumental) examination; outline the scope of studies in emergency and life-threatening conditions to clarify the diagnosis; (PK-16). - to identify the main clinical, laboratory and instrumental symptoms of diseases of internal organs and their combination in the syndromic diagnosis of internal diseases (PK-16); - construct algorithm for internal diseases (main, concomitant, complications) in adult patients, taking into account the ICD-10.

3. Prerequisites: Latin language, chemistry, biochemistry, biology, normal anatomy, pathological anatomy, normal physiology, pathological physiology, pharmacology

4. Post-requisites: Internal diseases 2, 3, 4, Surgical diseases 1, 2, Childhood illnesses 1, 2, Obstetrics and gynecology, Neurology, Family medicine, Clinical pharmacology and other clinical disciplines.

5. Technological table of the discipline

Modules	**Hours**			**Lectures**		**Practical**		**SWS**		**Landmark control**	**Final control**	**Total**
	Practical	IWS	Total	Hours	Points	Hours	Points	Hours	Points	Points	Points	**Points**
4-th semester PROPEDEUTICS OF INTERNAL DISEASES 1												
I	40	40	80	16	30	24	30	40	30	30		**30**
II	35	35	70	14	30	21	30	35	30	30		**30**
Final control											40	**40**
Total	**75**	**75**	**150**	**30**	**30**	**45**	**30**	**75**	**30**	**30**	**40**	**100**
	150											
	150											

6. The accumulation of points for the discipline

module 1(30p) practical points +points of BC1				module 2 (30p) practical points +points of BC2 2				FC
2				2				
№ lesson	hours	points	BC1 pract+ lect+ IWS ---------- 3	№ lesson	hours	points	BC2 pract+lect+IWS ---------- 3	40

7. Map of the accumulation of points in the discipline " PROPEDEUTICS OF INTERNAL DISEASES 1»

module 1(30p) practical points +points of BC1						module 2 (30p) practical points +points of BC2						FC
2						2						
№ lesson	Hours	Points	BC1 pract+ lect+ SW ---------- 3			№ lesson	hours	points	BC2 pract+lect+IWS ---------- 3			40
T-1	3	30	BC 1	lecture	SW				BC 2	lecture	SW	
T-2	3	30	30	30	30	T-9	3	30	30	30	30	
T-3	3	30				T-10	3	30				
T-4	3	30				T-11	3	30				
T-5	3	30				T-12	3	30				
T-6	3	30				T-13	3	30				
T-7	3	30				T-14	3	30				
T-8	3	30				T-15	3	30				

1. **Current control**

Sum of the practical points

# of practical classes

2. **Map of point gathering for РК**

- 30 points for practical classes,
- 30 points for lectures,
- 30 points for IWS,

And after summarizing, measure average arithmetic

$$\text{BC} = \frac{\text{Lec(30p)} + \text{Pract(30p)} + \text{SW(30p)}}{3} = 30\text{p}$$

3. **Module 1 (30p)**

$$\frac{\text{Current control} + \text{BC1 points}}{2}$$

4. **Module 2 (30p)**

$$\frac{\text{Current control} + \text{BC2 points}}{2}$$

8. The brief summary of the discipline

4-th semester (Propedeutics-1)

Topic # 1. **The main symptoms of diseases of the respiratory system detected during questioning and inspection, palpation, percussion, auscultation, laboratory and instrumental research methods**.

Basic research methods (questioning, examination, palpation, percussion and auscultation) of an adult patient with internal organ pathology. Rules of general examination of patients with pathology of internal organs. The main symptoms of internal diseases detected during the general examination.

Chest soreness during palpation and its diagnostic value. Changes in voice tremor (absence, amplification, attenuation) and its causes. Changes in percussion sound over the lungs in pathology (dullness, dull sound, tympanic sound, box sound, metallic sound, cracked pot sound). Changes in the boundaries of the lungs and their causes.

Changes in the main respiratory noises in pathology (pathological bronchial respiration, increased / decreased vesicular respiration). Side respiratory noises (wheezing, crepitation, pleural friction noise). Differential diagnosis of wet and dry wheezing, crepitation and pleural friction noise.

Normal parameters of laboratory methods of research in pulmonology. Interpretation of data from laboratory methods of research in respiratory diseases: general blood analysis, macroscopic and microscopic sputum analysis, analysis of pleural fluid (exudate, transudate). Normal parameters of instrumental research methods in pulmonology: radiation methods (chest X-ray, MRI, CT, radionuclide scintigraphy), endoscopic methods (bronchoscopy), diagnostic thoracentesis, functional methods (spirometry, peak flowmetry). Interpretation of data of instrumental methods of investigation in diseases of the respiratory system.

Analytical and critical thinking (the ability to collect all the survey and examination data and form the correct diagnosis)

***Topic #2*. Syndrome of focal and massive lung tissue consolidation. Syndrome of formation of a cavity in the lung.**

Etiology and pathogenetic nature of the syndrome of focal and massive compaction of lung tissue. Classification, stages and clinical picture. Specific symptoms, as observed through the basic and advanced methods of investigation in pulmonology.

The etiology and pathogenetic essence of syndromes of cavities in the lung. Classification, stages and clinical picture. Specific symptoms, as observed through the basic and advanced methods of investigation in pulmonology.

Analytical and critical thinking (the ability to collect all examination data and form a correct diagnosis)

***Topic #3.* Bronchiectasis syndrome. Syndromes of bronchial obstruction and emphysema.**

Etiology and pathogenetic nature of bronchiectasis, bronchial obstruction and emphysema syndromes. Classification and clinical picture. Specific symptoms detected by basic and complementary methods of research in pulmonology.

***Topic #4.* Syndrome of accumulation of fluid and air in the pleural cavity. Syndromes of respiratory failure and chronic pulmonary heart disease.**

The etiology and pathogenetic essence of syndrome of accumulation of fluid and gas in the pleural cavity. Classification and clinical picture. Specific symptoms, as observed through the basic and advanced methods of investigation in pulmonology.

Etiology and pathogenetic nature of respiratory failure syndrome. Classification and clinical picture. Specific symptoms detected by basic and additional methods of investigation in pulmonology.

The etiology and pathogenetic essence of the syndrome of chronic pulmonary heart. Classification and clinical picture. Specific symptoms, as observed through the basic and advanced methods of investigation in pulmonology.

***Topic #5.* The main symptoms of diseases of the cardiovascular system detected during questioning and inspection. Palpation, percussion and auscultation of the heart detected during vascular auscultation.**

Rules for questioning patients with diseases of the circulatory system. Identification of the main symptoms of circulatory diseases during questioning (specific and non-specific symptoms of heart and vascular diseases, cardialgia, coronary / non-coronary pain, palpitations, shortness of breath).

Technique of examination of patients with diseases of the circulatory system. Determination of the main symptoms of circulatory diseases during the examination (forced position of orthopnea, cyanosis and its types, carotid dance, carotid artery pulsation, Stokes collar, heart hump, aortic and pulmonary artery pulsation).

Technique of palpation of patients with diseases of the circulatory system. Determination of the main symptoms of circulatory diseases during palpation of the heart (displacement of the apical push, cardiac push, epigastric pulsation).

Technique of percussion of the heart of patients with diseases of the circulatory system. Determination of the main symptoms of circulatory diseases during heart percussion (changing the boundaries of relative and absolute dullness of the heart).

Technique of auscultation of the heart of patients with diseases of the circulatory system. Determination of the main symptoms of circulatory diseases during auscultation of the heart (changes in systolic and diastolic tone, abnormal heart tones, functional and organic heart murmurs).

Technique of auscultation of vessels of patients with diseases of the circulatory system. Determination of the main symptoms of diseases of the circulatory system during auscultation of blood vessels. Rules for the study of arterial pulse. Determination of the main symptoms of diseases of the circulatory system during the study of arterial pulse.

Topic #6 Main symptoms of cardiovascular system diseases determined by BP measurement. Specific symptoms of diseases of the cardiovascular system detected by laboratory methods.

Blood pressure measurement. Detection of the main symptoms of circulatory diseases during the determination of blood pressure (hypotension, hypertension and its stages, hypertensive crisis).

Normal parameters of laboratory research methods in cardiology. Interpretation of laboratory data (general blood analysis, lipid profile, cardiospecific enzymes, pericardial fluid analysis) of research methods in diseases of the circulatory system and determination of the main symptoms of these diseases.

Analytical and critical thinking (ability to collect all examination data and form a correct diagnosis)

Topic #7. **Specific symptoms of diseases of the cardiovascular system detected by ECG. Specific symptoms of the cardiovascular system detected on the ECG in the various forms of Coronary Heart Diseases.**

The conduction system of the heart is normal. Electrophysiological mechanisms of formation of electrocardio-grams. Principles and techniques of ECG recording (structure of the apparatus for recording heart potentials, responses, speed and values of cells on the ECG). Plan and methodology of ECG analysis (normal height and duration of individual ECG elements, heart rate calculation, detection of the rhythm driver, determination of the electric axis of the heart).

Electrocardiography (ECG). Electrophysiological basis of ECG. Rules and techniques for ECG registration. Determination of the main symptoms of circulatory diseases during an ECG study (changes in the pacemaker, heart rate, displacement of the electrical axis of the heart, changes in the height and duration of individual ECG elements). Symptoms of diseases of the cardiovascular system, detected on the ECG in various forms of CBS.

Topic #8. **Specific symptoms of diseases of the cardiovascular system detected by Echocardiography. Specific symptoms of diseases of the cardiovascular system detected during the x-ray of the heart**.

Physical basis of the method. The characteristics of the echostructures of the heart are normal. The main calculated parameters of the echocardiogram (M-mode). Standards of Echo-KG indicators in adults at rest (M-mode). Di-agnostic capabilities of Echo KG.

Echocardiography (EchoCG). Rules and techniques for recording echocardiography. Determination of the main symptoms of circulatory diseases during echocardiography (changes in the valvular apparatus of the heart, pathologic openings.

The ability to work in a team (joint coordinated work with all members of the group as a prototype of future teamwork in the hospital team).

Topic #9. **Specific symptoms of diseases of the cardiovascular system detected by coronary angiography. Syndromes of arterial hypertension**.

Rules and techniques of coronary angiography. Determination of indications for coronary angiography. The main symptoms detected during coronary angiography.

The etiology and pathogenetic essence of syndrome of arterial hypertension. Classification by type (essential, symptomatic) and stage (WHO and American Heart Association classification) and clinical picture (white coat syndrome, hidden hypertension). Specific symptoms detected by basic and additional methods of research in cardiology. Daily blood pressure monitoring.

The ability to work in a team (joint coordinated work with all members of the group as a prototype of future teamwork in the hospital team).

Topic #10. **Syndromes of coronary insufficiency. Symptoms of cardiomegaly.**

The etiology and pathogenetic essence of syndrome of coronary insufficiency. Classification (according to WHO) and clinical picture (types of anginal pain). Specific symptoms detected by basic and additional methods of research in cardiology. The role of coronary angiography and functional methods in diagnosis.

The etiology and pathogenetic nature of the cardiomegaly syndrome. Classification (hypertrophy and dilation of the heart chambers) and clinical picture. Specific symptoms detected by basic and additional methods of research in cardiology. The role of echocardiography in diagnosis.

Analytical and critical thinking (the ability to collect all examination data and form a correct diagnosis)

Topic #11. **Arrhythmia syndrome. The syndrome of conduction disorders of the heart.**

Etiology and pathogenetic nature of the syndrome of cardiac arrhythmias. Classification (cardiac arrhythmias) and clinical picture (diagnosis of life-threatening arrhythmias). Specific symptoms detected by basic and additional methods of research in cardiology. The role of daily ECG monitoring in diagnosis.

The etiology and pathogenetic essence of the syndrome of conduction disorders of the heart. Classification (heart blockages) and clinical picture (diagnosis of life-threatening blockages). Specific symptoms detected by basic and additional methods of research in cardiology. The role of daily ECG monitoring in diagnosis.

Topic #12. **Syndrome lesions of the endocardium (valvular heart disease).**

The etiology and pathogenetic essence of the syndrome of lesions of the endocardium. Classification (congenital and acquired heart defects) and clinical picture (white and blue defects). Specific symptoms identified by basic and additional methods of research in cardiology. The role of echocardiography in diagnosis

Topic #13. **Syndrome of myocardial dysfunction.Syndromes of inflammation of pericardium.**

The etiology and pathogenetic essence of the syndrome of defeat of a myocardium. Classification (ischemic and autoimmune myocardial lesions) and clinical picture. Specific symptoms detected by basic and additional methods of research in cardiology.

The etiology and pathogenetic essence of syndrome of lesion of pericardium. Classification and clinical picture. Specific symptoms detected by basic and additional methods of research in cardiology.

The ability to work in a team (joint coordinated work with all members of the group as a prototype of future teamwork in the hospital team).

Topic #14. **Acute heart failure syndrome**

Etiology and pathogenetic nature of acute heart failure syndrome. Classification and clinical picture. Specific symptoms detected by basic and additional methods of research in cardiology.

Topic #15. **The syndrome of chronic heart failure. The total syndrome of heart failure**

The etiology and pathogenetic essence of the syndrome of chronic heart failure. Classification and clinical picture. Specific symptoms detected by basic and additional methods of resear zch in cardiology.

8. Calendric and topical plan of the discipline

8.1. Lectures

№ and name of the topic	№	Competencies	Hours	Points	Lit-re	Educ.tech	week
1	2	3	4	5	6	7	8
4-th semester							
Module 1							
Theme №1. The main symptoms of diseases of the respiratory system detected during questioning, inspection, palpation and percussion.	1	*PC5,PC15*	2	30	1, 2, 3, 4, 5, 6	LV, ACS	1
Theme №2. The main symptoms of diseases of the respiratory system detected during auscultation, laboratory and instrumental methods of examination.	2	*PC5,PC15*	2	30	1, 2, 3, 4, 5, 6	MP, LV.	1
Theme №3. Syndrome of focal and massive lung tissue consolidation. Syndromes of cavities in the lung and bronchiectasis .	3	*PC5,PC15*	2	30	1, 2, 3, 4, 5, 6	MP, LV.	2
Theme №4. Syndromes of bronchial obstruction and emphysema. Syndromes of accumulation of fluid and air the pleural cavity.	4	*PC5,PC15*	2	30	1, 2, 3, 4, 5, 6	MP, LV	2
Theme №5. Respiratory failure. Chronic pulmonary heart disease.	5	*PC5, PC15, PC16*	2	30	1, 2, 3, 4, 5, 6	LV, BS	3
Theme №6. The main symptoms of diseases of the cardiovascular system detected during questioning, inspection, palpation and percussion.	6	*PC5,PC15*	2	30	1, 2, 3, 4, 5, 6	MP.	3
Theme №7. The main symptoms of diseases of the cardiovascular system detected during auscultation of the heart. Main symptoms of diseases of the cardiovascular system diseases determined by BP measurement.	7	*PC5, PC15, PC16*	2	30	1, 2, 3, 4, 5, 6	MP, LV.	4
Theme №8. Specific symptoms of diseases of the cardiovascular system detected by laboratory research methods. Specific symptoms of diseases of the cardiovascular system	8	*PC5,PC15*	2	30	1, 2, 3, 4, 5,	MP, LV.	4

detected by ECG.					6		
Module							5
Total module 1:	**16 lectures**		**16**				
Module 2							
Theme №9. Specific symptoms of diseases of the cardiovascular system detected by echocardiography. Specific symptoms of diseases of the cardiovascular system detected by X-ray of the heart and coronary angiography.	9	*PC5, PC15, PC16*	2	30	1, 2, 3, 4, 5, 6	MP, LV.	5
Theme №10. Syndromes of arterial hypertension and hypotension.	10	*PC5, PC15, PC16*	2	30	1, 2, 3, 4, 5, 6	LV	6
Theme №11. Syndromes of coronary insufficiency. Symptoms of cardiomegaly.	11	*PC5, PC15, PC16*	2	30	1, 2, 3, 4, 5, 6	MP, LV.	6
Theme №12. Rhythm and conduction disorders of the heart.	12	*PC5, PC15, PC16*	2	30	1, 2, 3, 4, 5, 6	MP	7
Theme №13. Syndromes lesions of the endocardium (valvular heart disease).	13	*PC5,PC15*	2	30	1, 2, 3, 4, 5, 6	***ACS***	8
Theme №14. Syndromes of myocardial and pericardial damage.	14	*PC5,PC15*	2	30	1, 2, 3, 4, 5, 6	MP, LV.	8
Theme №15. Acute heart failure syndrome. The syndrome of chronic heart failure.	15	*PC5,PC15*	2	30	1, 2, 3, 4, 5, 6	MP, LV.	9
Module 2			**14**	**30**			**9 week**
Total: ID1 4th semester	**30 lectures**		**30**	**30**			**15 weeks**

Notes: MP – multimedia presentation, LV – lecture visualization, RP – role play, CTP – computer training program, ACS -analysis of clinical situations.

8.2. Practicals

№ and name of the topic	№ of class	Competencies	Hours	Points	Lit-re	Edu/tech.	Week	Control
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
4th semester								
Module 1								
Theme №1. The main symptoms of diseases of the respiratory system detected during questioning and inspection, palpation, percussion, auscultation, laboratory and instrumental research methods.	1	*PC5,PC15*	3	30	1, 2, 3, 4, 5, 6	PSA, OQ, TBL,	1	T, OS. PS
Theme №2. Syndrome of focal and massive lung tissue consolidation. Syndrome of formation of a cavity in the lung.	2	*PC5,PC15*	3	30	1, 2, 3, 4, 5, 6	BS, T, SG.	2	T, OS, CS
Theme №3. Bronchiectasis syndrome. Syndromes of bronchial obstruction and emphysema.	3	*PC5,PC15*	3	30	1, 2, 3, 4, 5, 6	*OQ , ACS, BS*	3	T, OS, PS
Theme №4. Syndrome of accumulation of fluid and air in the pleural cavity. Syndromes of respiratory failure and chronic pulmonary heart disease.	4	*PC5,PC15*	3	30	1, 2, 3, 4, 5, 6	CS, SG, PSA	4	T, OS, PS
Theme №5. The main symptoms of diseases of the cardiovascular system detected during questioning and inspection. Palpation, percussion and auscultation of the heart detected during vascular auscultation.	5	*PC5, PC15, PC16*	3	30	1, 2, 3, 4, 5, 6	TBL , PSA, OQ	5	T, OS, PS
Theme №6. Main symptoms of cardiovascular system diseases determined by BP measurement. Specific symptoms of diseases of the cardiovascular system detected by laboratory methods.	6	*PC5,PC15*	3	30	1, 2, 3, 4, 5, 6	*OS , T, PSA*	6	T, OS, CS
Theme №7. Specific symptoms of diseases of the cardiovascular system detected by ECG. Specific symptoms of the	7	*PC5, PC15, PC16*	3	30	1, 2, 3, 4,	OQ, T, CBL,	7	T, OS, PS

cardiovascular system detected on the ECG in the various forms of Congenital Heart Diseases.					5, 6	PSA		
Theme №8. Specific symptoms of diseases of the cardiovascular system detected by Echocardiography. Specific symptoms of diseases of the cardiovascular system detected during the x-ray of the heart.	8	*PC5,PC15*	3	30	1, 2, 3, 4, 5, 6	TBL , CS, T	8	T, OS, PS
Module								
Total	**9classes**		**24**	**30**			**9week**	
Module 2								
Theme №9. Specific symptoms of diseases of the cardiovascular system detected by coronary angiography. Syndromes of arterial hypertension.	9	*PC5,PC15*	3	30	1, 2, 3, 4, 5, 6	TBL , PSA, OS.	10	T, OS, PS
Theme №10. Syndromes of coronary insufficiency. Symptoms of cardiomegaly.	10	*PC5,PC15*	3	30	1, 2, 3, 4, 5, 6	SG, CS, OS.	11	T, OS, PS
Theme №11. Arrhythmia syndrome. The syndrome of conduction disorders of the heart.	11	*PC5, PC15, PC16*	3	30	1, 2, 3, 4, 5, 6	TBL PSA, T	12	T, OS, PS
Theme №12. Syndrome lesions of the endocardium (valvular heart disease).	12	*PC5,PC15*	3	30	1, 2, 3, 4, 5, 6	OS, T *RPG*	13	T, OS, PS
Theme №13. Syndrome of myocardial dysfunction. Syndromes of inflammation of pericardium.	13	*PC5, PC15, PC16*	3	30	1, 2, 3, 4, 5, 6	TBL, OS T.	14	T, OS, PS
Theme №14. Acute heart failure syndrome.	14	*PC5, PC15, PC16*	3	30	1, 2, 3, 4, 5, 6	PBL , T, PSA.	15	T, OS, PS
Theme №15. The syndrome of chronic heart failure. The total syndrome of heart failure.	15	*PC5, PC15, PC16*	3	30	1, 2, 3, 4, 5, 6	CTBL, *RPG*, OS.	16	T, OS, PS

Module 2	**15 classes**		**21**	**30**			**17week**	
Total ID 4th semester	**15classes**		**45**	**30**			**9 week**	

Notes: *RPG-role-playing game, CTP-computer training program, ACS-analysis of clinical situations, SG-small groups, ST-situational tasks, T-testing, OS-oral survey, PS- practical skills,* CS-case study, BS - brainstorming method,

8.3. Independent work of the student (IWS)

№	Topics	Competencies	Hours	Form of control	Points	Lit-re	Deadline
4-th semester							
module 1							
1	**Theme №1.** Symptomatology of pneumonia and lung abscess.	*PC5, PC15, PC16*	5	T, R ,	30	1, 2, 3, 4, 5, 6	1
2	**Theme №2.** Symptomatology of acute and chronic bronchitis	*PC5, PC15, PC16*	5	R, CS	30	1, 2, 3, 4, 5, 6	2
3	**Theme №3.** Symptomatology of COPD and Bronchial asthma.	*PC5, PC15, PC16*	5	PP, PS	30	1, 2, 3, 4, 5, 6	3
4	**Theme 4.** Symptomatology of bronchiectasis and pleurisy	*PC5, PC15, PC16*	5	T, R,	30	1, 2, 3, 4, 5, 6	4
5	**Theme №5.** Symptomatology of spontaneous pneumothorax and chronic pulmonary heart disease	*PC5, PC15, PC16.*	5	CS, PS	30	1, 2, 3, 4, 5, 6	5
6	**Theme №6.** Symptomatology of spontaneous pneumothorax and chronic pulmonary heart disease	*PC5, PC15, PC16.*	5	R, OI	30	1, 2, 3, 4, 5,	6

						6	
7	**Theme 7.** Symptomatology of treatment of hypertension and hypertensive crisis.	*PC5, PC15, PC16.*	5	OI, R	30	1, 2, 3, 4, 5, 6	7
8	**Theme №8.** Symptomatology of treatment of hypertension and hypertensive crisis.	*PC5, PC15, PC16..*	5	CW, PS.	30	1, 2, 3, 4, 5, 6	8
9	**Module**						9
	Total:	**8 IWS**	**40**		**30**		
Module 2							
9	**Theme №9.** Symptomatology of CHD (sudden coronary death and various types of angina pectoris).	*PC5, PC15, PC16*	5	R , T, PS	30	1, 2, 3, 4, 5,6	10
10	**Theme №10.** Symptomatology of CHD-2 (acute coronary syndrome and myocardial infarction).	*PC5, PC15, PC16*	5	R, CS T	30	1, 2, 3, 4, 5,6	11
11	**Theme №11.** Symptomatology of chronic rheumatic heart disease and infectious endocarditis.	*PC5, PC15, PC16*	5	T, OI, CS	30	1, 2, 3, 4, 5,6	12
12	**Theme №12.** Symptomatology of acquired heart defects.	*PC5, PC15, PC16*	5	*CW, SC*	30	1, 2, 3, 4, 5,6	13
13	**Theme №13.** Symptomatology of myocarditis, pericarditis, and cardiomyopathy.	*PC5, PC15, PC16*	5	T, R	30	1, 2, 3, 4, 5,6	14
14	**Theme №14.** The symptomatology of arrhythmias and heart block.	*PC5, PC15, PC16*	5	PP ,CS.	30	1, 2, 3, 4, 5, 6	15
15	**Theme №15.** Symptomatology of heart failure.	*PC5, PC15, PC16*	5	T, OI.	30	1, 2, 3, 4, 5,	16

						6	
	Total	**7 IWS**	**35**		**30**		**17 week**
	Total 5th semester:	**15 IWS**	**75**		**30**		

T - tests, R – referat, PS – presentation of scills, SC-situational cases, OI – oral interview, PP- poster presentation, creative work-CW.

10. Educational and methodological support of the course.

MAIN LITERATURE

1. Davidson's Principles and Practice of Medicine 24rd Edition 2022

2.Talley & O'Connor's Clinical Examination A systematic guide to physical diagnosis, 9th edition, 2022

3. Lab Values Interpretation: The ultimate laboratory tests manual of reference ranges and what they mean (Kindle Edition), 2020

4. Bates' Guide to Physical Examination and History Taking, 13e by Lynn S. Bickley 2020

5. Macleod's Clinical examination Edited byJ Alastair Innes, Anna R Dover 15th edition 2018

«Propaedeutics of Internal medicine» (textbook for students of medical faculty). A.T. Mamasaidov, Osh 2021.

6. «Special propaedeutics of internal diseases» (lecture course) 2d edition. L. Nemtsov. Vitebsk 2016.

7. «Clinical medicine» (a systemic guideline to physical diagnosis) 9th edition. Parveen Kumar et al. Elsevier 2016.

ADDITIONAL LITERATURE

1. Clinical examination a systematic guide to physical diagnosis This edition 2014. Elsevier Austalia.

2. Kumar & Clark's Clinical Medicine, 8th edition / Edited by Parveen Kumar, Michael Clark. – Saunders Ltd. – 2012

3. Harrison's principles of internal medicine, 21st Edition / Edited by Dan Longo, Anthony S. Fauci etc. - The McGraw-Hill Professional. 2022

4. «Clinical examination» (a systemic guideline to physical diagnosis) 7th edition. Nicholas J. Tally et al. Sydney 2014. P

5. «Approach to Internal Medicine» David Hui (Third edition January 20

Internet resources:

https://www.medkurs.ru/lecture2k/ppi/

- *https://ibooks.oshsu.kg/book/?lg=1&id_parent=376&id1=1834&id4*.
- *http://eurorad.org/*
- *https://pubmed.ncbi.nlm.nih.gov/*.
- *www.Cochrane.com*
- *www.up-to-date.com*
- *www.Medline.com*
- *www.wedmedinfo.ru*
- https://www.cochranelibrary.com/
- https://www.tripdatabase.com/
- *https://www.hindawi.com/journal*

11. Evaluation information.

Rating (points)	Grade based on letter system	The numeral equivalent evaluation	Traditional system assessment
87 – 100	A	4,0	Excellent
80 – 86	B	3,33	Good
74 – 79	C	3,0	
68 -73	Д	2,33	Satisfactorily
61 – 67	E	2,0	
31-60	FX	0	Unsatisfactory

12. Scoring in discipline.

The student can score points in all types of classes. At lectures =30p and practical class (each current control) = 30p. At the boundary control-a maximum =30p. For the implementation of the IWS = 30p.

Score points for the practical classes:

Student activities	Name tasks				**Practical skills**								
	Testing control or brainstorming or proper presentation of material				**Situational tasks or role-playing game**				**Interpretation of laboratory-instrumental data**				**Total points**
	8				**12**				**10**				**30**
	«5»	«4»	«3»	«2»	«5»	«4»	«3»	«2»	«5»	«4»	«3»	«2»	
	8	6	4	2	12	10	8	2	10	8	6	2	

Assessment of students' knowledge on level tasks

Level	Name tasks	Number of tasks	**Maximum points**	Score on "5" point system
1-level	Testing control or oral survey	4	8point	«3»
2- level	Analysis, synthesis by visual material	2	10 point	«4»
3-level	Evaluation	2	12 point	«5»

Assessment of students' knowledge on level tasks

Level	Name tasks	Number of tasks	**Maximum points**	Score on "5" point system
1- level	Testing control or oral survey	4	8point	«3»
2- level	Analysis, synthesis by visual material	2	10 point	«4»
3- level	Evaluation	2	12 point	«5»

12. Scoring in discipline.

The student can score points in all types of classes. At lectures and seminars - for activity, attendance and availability of abstracts. At the boundary control-a maximum of 10p: for a test or a written answer. For the implementation of the IWS – 5p.

13. Politics in the discipline.

The organization of the educational process is carried out on the basis of a credit-modular system according to the requirements, with the use of a modular rating system for assessing the progress of students using the AVN information system.

Requirements:

a) Mandatory attendance;

b) Activity during lectures and practical classes;

C) Preparation for classes, homework and SRS.

Unacceptably:

a) being Late and leaving school;

b) Use of cell phones during classes;

C) Untimely delivery of tasks.

Bonus points consist of activity in the classroom, performing extracurricular independent work by students, scientific work, attendance of lectures.

Penalty points consist of points received for dishonesty, inactivity, absenteeism, etc.

Bonus points.

1. Preparation of presentations – 2 points.
2. Production of stands – 3 points.
3. Production of tables: 1tablitsa-1 point.
4. Preparation of abstract messages – 1 point.
5. Systematic active work during the semester in practical classes - 2 points.
6. 100% attendance-2 points
7. Participation in the work of the SSC - 5 points
8. Preparation of the report and presentation at student conferences - 8 points
9. Attendance at the meeting of the Cho -2 points

Penalty point.

1. Regular lateness to classes – 1 point.
2. Missed lectures and classes - 2 points
3. Disrespectful attitude to medical personnel, patients, teacher-3 points.
5. Smoking on the territory of the medical institution – 3 points.
6. Untidy appearance, lack of Bathrobe, cap, replacement shoes - 1 point.
7. Damage to the Cathedral property - 3 points
8. A systematic lack of preparation for practical classes – 2 points.

9. Violation of discipline classes - 1 point

Note: a student can score a maximum of 10 bonus points
and penalty points not more than 10 (per semester).

14. Evaluation tools for the current, boundary and final control of the discipline

1. Module 1

1	1. Give the definition for such sciences as Internal Medicine and Propaedeutic. 2. Describe the basic method for assessment of tactile/vocal fremitus. Indicate causes for increased, decreased and absent vocal fremitus (voice trembling). 3. How to do percussion of the liver? 4. Which types of added (collateral) respiratory sounds do you know? 5. Laboratory examination of bronchial washings (indications, contraindications, technique, technology implementation, diagnostic value).
2	1. Give the definition of such concept as Diagnosis. Which types of diagnosis do you know? 2. Describe the technique of the palpation of the thyroid gland. 3. What is the main task of comparative percussion of the lungs? Describe the main points and sequence of comparative percussion of the lungs. 4. What is mechanism and site of dry rales? On which types are divided dry rales? 5. Laboratory examination of pleural content (indications, contraindications, technique, technology implementation, diagnostic value).
3	1. Give the definition for signs or symptoms of the disease. Specify which symptoms we can call subjective and which objective. 2. Describe the technique of ECG, leads, waves, intervals, segments. 3. What are the basic qualities of normal percussion sound over the lungs? List main causes of sound changes during percussion. 4. What is mechanism of crepitation generation? 5. Thoracentesis.
4	1. Please define the concept of syndrome. 2. What respiration types are known to you? What are the signs typical for thoracic (costal) respiration? What are the signs typical for abdominal respiration? What are the signs typical for mixed respiration? 3. How to determine relative borders of the heart. 4. What is mechanism of pleural friction noise? Pleural rubs, characteristics, mechanism of their appearance. Diagnostic meaning of pleural rub. 5. Imaging studies used to examine the patients with disorders of the respiratory system: X-rays, CT-scan, magnetic resonance imaging, pulmonary angiography, ultrasound examination.
5	1. Please specify the purpose of inquiring of the patient. Which aspects are included in inquiring of the patients? 2. List pathological periodic types of respiration. 3. Palpation of the spleen. 4. What is the difference between crepitation and pleural friction sound? 5. Examination of sputum for sensibility and susceptibility for antibiotics.
6	1. What it is “Anamnesis morbi”? What it is “Anamnesis vitae”? 2. Describe funnel chest. List the diseases that can cause such shape of the chest. 3. Symptoms of the emphysema syndrome. 4. What is mechanism and site of moist rales? What types of moist rales do you know? 5. Transudate and exudate characteristics.

7	1. Palpation of the stomach. 2. Describe rachitic (pigeon) chest. List the diseases that can cause such shape of the chest. 3. Indicate the main purpose of topographic percussion and name the lower borders by intercostal spaces. 4. Normal values of glucose levels (GTT, postprandial) 5. What are the main complaints and symptoms of the syndrome of broncho-obstruction?
8	1. What determined by the method of palpation? What types of palpation techniques are known to you, indicate their purpose? 2. Indicate basic technique in determination of the upper borders of the lungs. 3. Palpation of bones, muscles and joints. 4. Arterial hypoxemia definition and causes. 5. What are the main complaints and symptoms of the syndrome of massive lung tissue consolidation?
9	1. Liver function tests. 2. Describe paralytic chest. List the diseases that can cause such shape of the chest. 3. Indicate basic technique in determination of the width of Crenig area 4. Auscultation of the heart: main sounds and points on the chest. 5. What are the main complaints and symptoms of the syndrome of lung cavity formation?
10	1. Indicate the main purpose of such diagnostic method as auscultation. Specify the key points of auscultation. 2. Describe emphysematous chest. List the diseases that can cause such shape of the chest. 3. EchoCG 4. Macroscopy of the sputum. 5. What are the main complaints and symptoms of the syndrome of focal lung tissue consolidation?

2. Module 2

1.	• What are specific and nonspecific complaints in the cardiovascular diseases? • Please describe technique of palpation of heart region. Where is found a normal apex beat? • Study of blood pressure. Methods for measuring blood pressure • Atherosclerosis. Concept. Risk factors of atherosclerotic diseases. • Male 57 years old, smoker with dyslipidemia, complains for 6 months on squeezing and pressing chest pain occurring during walking at a brisk pace or climbing 3 flights of stairs, radiating to the left shoulder, pain duration up to 5 minutes, relieving in 2-3 minutes after nitroglycerin intake. ✓ What is the syndrome observed in a patient? ✓ Specify risk factors ✓ Specify further investigations ✓ Formulate a diagnosis
2.	• What is typical to the heart pain? • What are causes of the apex beat displacement? • Primary hypertension. • How to determine relative cardiac dullness, configuration of the heart. • Male 49 years, complains on the first ever encountered intense burning pain behind the sternum radiating to the neck, jaw, pain, duration 2 hours, accompanied by a sense of fear of death, cold sweat, shortness of breath. ✓ What syndrome is observed? ✓ Specify further investigation ✓ Treatment approach ✓ Possible ECG changings

3.	• What is the symptom of palpitation? • Pulsation of the aorta. Where it can be seen and under what conditions? • What can be causes of tachycardia and bradycardia? • Chronic heart insufficiency. • A man 43 years old, on examination :"carotid dance," De Musset's sign, a positive capillary pulse, blood pressure 150/40 mm Hg. On heart auscultation in the IInd intercostal space to the right of the sternum easing II tone, diastolic murmur. ✓ Explain the changes identified during the inspection ✓ Stage the measured blood pressure ✓ Specify further investigations ✓ Formulate a diagnosis
4.	• What are specific sings of the edema in cardiovascular disease? • Cardiac impulse. Where it's located and under what pathological conditions it arises? • Stable angina pectoris. • Coronary and non-coronary chest pain • Male 76 years, 3 years ago experienced myocardial infarction, complains on shortness of breath with minimal exertion (self service), gradually increasing swelling of the feet and legs, abdominal distension, feeling of heaviness in the right upper quadrant. ✓ What syndrome is observed? ✓ The most likely diagnosis? ✓ Specify further investigations ✓ Possible ECG changings
5.	• What causes of the syncope do you know? • Apex beat. Where it is located normally? Name pathological changes that lead to a change of localization of the apex beat. • Acute coronary syndrome. • ECG. • Female 24 years, complains of shortness of breath at rest, edema of the lower extremities, dizziness, palpitations, periodical fainting. Physical examination: acrocyanosis, dilated neck veins, expanding the boundaries of the heart to the right, predominance of S2 on pulmonary artery, systolic murmur in the IV point of auscultation, hepatomegaly, ascites. ✓ Interpret the results of a general examination ✓ What syndromes are observed? ✓ Specify further investigation? ✓ Formulate a diagnosis
6.	• What forced postures in patients with cardiovascular disease are distinguished? • Symptom of systolic and diastolic trembling. Where is defined? What pathological changes cause this symptoms? • Spontaneous angina. • Systemic, pulmonary and coronary circulation • Heart examination: The apical beat is clearly visible in the V intercostal space along the middle-clavicular line. Palpation: The apical beat in the V intercostal space along the left median-clavicular line is strengthened, elevating, concentrated. The cardiac beat and epigastric pulsation are not detected. ✓ Due to what appears epigastric pulsation? ✓ Is apical beat in normal position? ✓ Is there a significant left ventricular dilation in this case? ✓ Is there a significant right ventricular dilation in this case?

7.	• What changes of skin and visible mucosa color in patients with cardiovascular pathology are distinguished? • Configuration of the heart, what is it? Name the pathological conditions when the heart has mitral configuration, and when there is aortic configuration? • Atrial fibrillation. Symptomatology, ECG diagnosis. • Intermissions, palpitation. • Heart examination: The apical beat is clearly visible on the eye, strengthened, diffuse, shifted to the anterior axillary line. Palpation: apical beat in the VI intercostal space along the anterior axillary line, diffuse, strengthened. The cardiac beat and epigastric pulsation are not detected. ✓ Is apical beat located normally? ✓ Is there a right ventricular dilation in this case? ✓ Formulate possible diagnosis ✓ Specify further investigations
8.	• What special features can be found in the inspection of the face in patients with cardiovascular pathology? • What is examination plan of percussion of the heart? • Myocardial infarction. • Causes of hemoptysis in cardiovascular diseases • Male 67 years old complains of decreasing vision during six months. Anamnesis. During 6 months reports BP elevation up to 220/110 mm Hg. 2 months ago antihypertensive therapy was started. Despite antihypertensive treatment, BP level is 180-190 /110 mm Hg. Smokes (Smoking index 60 pack-years). OBJECTIVE: BMI 25 kg/m2. Waist circumference of 90 cm. The apex beat is palpated 2 cm outwards from the midclavicular line in the V intercostal space on the left, reinforced, resistant, with area of 2 cm2. The boundaries of the relative dullness of the heart are shifted to the left. Predominance of S2 in the II point of auscultation. BP 192/111 mm Hg Auscultation of the renal arteries - systolic murmur, more pronounced on the left artery. Chemistry: total cholesterol 9.0 mmol/L, LDL cholesterol of 4.5 mmol/L, creatinine 150 mkmol/L, GFR 41 mL/min /1.73 m2. ECG: sinus rhythm. Left axis deviation. • Interpret the results of a general examination • Interpret the results of palpation and percussion of the heart • Interpret the results of auscultation of the heart and arteries • Formulate and justify the diagnosis
9.	• What are mechanisms of edema formation in patients with cardiovascular pathology? • How to determine relative cardiac dullness, configuration of the heart. • Syndrome of circulatory insufficiency. • Capillary pulse symptom • Male 69 years old, complains of shortness of breath quickly accrued to the extent of suffocation, getting worse in supine position, cough with albuminoid pink sputum. Complaints appeared after emotional stress. History: a long-term history of hypertension, occasional antihypertensive therapy intake PE: orthopnea. Acrocyanosis, moist skin. Increased jugular venous pressure. Bubbling breath. RR 30 /min. Crackles over both lungs . The borders of the relative dullness of the heart are shifted to the left. Predominance of S2 in II intercostal space on the right. BP 214/122 mm Hg, heart rate 96 beats / min ECG: sinus rhythm. ST-segment depression in V4-V6 leads. • Interpret the results of a general examination • Interpret the results of lung auscultation • Interpret the results of heart auscultation • Leading syndromes, a possible diagnosis?

10	• What methods of edema revelation can be used in patients with cardiovascular pathology? • How to determine absolute cardiac dullness, configuration of the heart. • Electrocardiographic leads (standard, enhanced, chest). • Radio-femoral delay symptom • Pulse pressure