



APPROVED  
EMD decision

2021

Protocol No. 6

Chairman of the EMC, Vice-Rector,  
candidate of pedagogical sciences,  
associate professor Apezova D.U.

## SYLLABUS by discipline

### B.6.2. THERAPY

For students of the educational program, higher professional education in the specialty 560001 "General Medicine" (5-year education) in the specialty "Doctor"

Type of study work	Total hours
course	5
Semester	10
Number of weeks	18
Credits	2
The total complexity of the discipline	60
Classroom/practical studies (PS)	
Student Independent Work (SIW)	60
Forms of control	
current control	Testing, oral questioning, written test
Frontier control	Testing
Midterm	Testing
Final control	exam
Semester rating by discipline:	Point-rating system

### Information about the teacher of the academic discipline

Full Name	
Job title	Teacher
Academic degree	
Academic title	
Email address	
Location of the department (address)	KR, Bishkek, st. Shabdan Baatyr 128, floor 2, room 6
Telephone	
Consultation hours	11.00-13.30

### Characteristics of the academic discipline

*The purpose of studying* the discipline. The study of this course contributes to the formation of students in the specialty "Therapy" of a system of universal and professional competencies necessary for the independent work of a therapist in a primary health care, outpatient and inpatient network aimed at preserving and strengthening the health of the adult population (analysis of the etiology, pathogenesis and clinical manifestations of diseases of the internal organs of a person, their diagnosis, non-surgical treatment, prevention of diseases and organization of rehabilitation of patients). Students are trained to master the methods of providing medical care to patients with diseases of a therapeutic profile in the form of primary

health care, specialized, including high-tech, emergency, including emergency specialized, medical care, which includes measures for prevention, timely (early) detection of diseases, diagnosis, treatment and medical rehabilitation of the most common diseases of therapeutic profile, formation of a healthy lifestyle and sanitary and hygienic education of the population. The method of selecting a patient for consultation with a specialist in accordance with the patient's disease profile and, subsequently, monitoring the patient's condition and treatment in accordance with the recommendations of a specialist doctor on the patient's disease profile. The methodology of providing medical care to patients with diseases of a therapeutic profile in accordance with the established procedures for the provision of certain types (by profile) of medical care (cardiological, pulmonological, rheumatological, gastroenterological and others) and standards of medical care.

**Prerequisites of the discipline:**

- Fundamentals of clinical examinations in internal diseases
- Fundamentals of clinical examinations in pediatrics
- Anesthesiology, intensive care, emergency conditions
- Family medicine
- Neurology with the basics of neurosurgery
- Forensic medicine with jurisprudence
- Infectious diseases
- General physiotherapy, VC and physical therapy
- Disaster Medicine

**Postrequisites of the discipline:**

- Pediatrics
- Surgery
- Obstetrics and gynecology

**Learning outcomes of the discipline according to the RO GPP**

The study of the discipline of microbiology, virology and immunology will contribute to the achievement of learning outcomes (RE) GEP:

**RE-15** - is to demonstrate the knowledge and skills necessary to promote the improvement of public health at the individual and public level, respecting the needs of various groups.

Within the framework of this discipline, it is expected to achieve the following results of teaching the discipline, which are implemented within the framework of achieving competencies:

**PC-16** - is able and ready to use the algorithm of diagnosis (main, concomitant, complications) taking into account the ICD, perform basic diagnostic measures to identify urgent and life-threatening conditions;

**PC-21** - is capable and ready to conduct physiological pregnancy, delivery.

**Content of the discipline**

№№	Name of topics
1.	Organizational issues of providing therapeutic care. The current state of the healthcare system
2.	Prospects for the development of therapeutic care. Healthcare systems. World experience. Modern concepts of healthcare reform
3.	Organization of therapeutic assistance to the population, features of inpatient and outpatient care. The procedure and 16 standards of medical care in the specialty "Internal diseases". Criteria for assessing the quality of medical care provided by a general practitioner
4.	Issues of management, economics and planning of therapeutic services. The concept of insurance medicine. The importance of insurance medicine in the work of therapeutic units.
5.	Organization of the examination of working capacity. Fundamentals of medical and social expertise
6.	Organizational issues of providing therapeutic care in the context of a pandemic associated with a new coronavirus infection.
7.	General issues of diagnosis and treatment of diseases in the practice of a general practitioner
8.	Types of diagnosis, correct construction of the diagnosis. Diagnostics as a scientific discipline. Features of thinking in the recognition of diseases. Diagnosis, definition of the term, diagnosis as the basis for choosing a method of treatment and prevention. Types of diagnosis: clinical, pathoanatomic, forensic. Types of diagnoses according to the degree of validity: preliminary, final, questionable. Types of diagnosis according to the degree of detection of the disease: early, late, retrospective, postmortem. The basics of the correct construction of detailed clinical and

	pathoanatomic diagnosis. The main causes of diagnostic errors. Discrepancy of clinical and pathoanatomic diagnosis.
9.	Strategy and tactics of patient examination. Fundamentals of differential diagnosis. The main causes of diagnostic errors. The concept of clinical syndrome. The basics of conducting a syndrome differential diagnosis. The tactics of the examination of the patient, the rationale for the tactics of the examination, the contribution of physical, laboratory, functional, instrumental methods of examination in establishing the correct diagnosis in therapy. The concept of sensitivity, specificity, diagnostic significance of a method or test
10.	Building a treatment plan. The contribution of various treatment methods. The concept of medical standards of treatment. The role of diet therapy, drug and non-drug treatment methods. The role of rehabilitation in therapy.
11.	Respiratory diseases
12.	Examination of patients with respiratory pathology. The main symptoms and syndromes in pulmonology. Methods of physical examination. Assessment of the nutritional status of the patient. Laboratory diagnostic methods. Study of the function of external respiration. Investigation of the diffusion capacity of the lungs. Acid-base state: normal parameters, interpretation of changes, correction of violations. Instrumental diagnostics in pulmonology. X-ray examination methods, ultrasonography, endoscopy, radioisotope research methods, computed tomography, nuclear magnetic resonance, positron emission tomography - diagnostic value of methods, indications, contraindications.
13.	Acute bronchitis. Etiology, pathogenesis. Classification, clinic, laboratory and functional diagnostics. Treatment, prevention.
14.	Bronchial asthma. Classification, etiology, pathogenesis, clinical forms. Complications. Determination of the severity of bronchial asthma. Asthmatic status. Differential diagnosis. Standards of bronchial asthma therapy. Indications for hospitalization. Prevention, medical examination.
16.	Pulmonary infiltration syndrome. Pneumonia. Etiology, pathogenesis, pathomorphology, modern classification. Clinical picture and criteria for diagnosis of community-acquired, nosocomial, atypical pneumonia. Secondary pneumonia. Features of the course of pneumonia caused by coronavirus. Diagnostic methods. Features of the course in adolescence and old age. Complications. Differential diagnosis. Indications for hospitalization of patients. Indications for the presence of patients in the intensive care unit. Criteria for severe pneumonia. Infectious-toxic shock. Sepsis. Modern approaches to the treatment of pneumonia. Treatment of pneumonia associated with Covid infection. Criteria for the effectiveness of treatment. Prevention, medical examination
17.	Sarcoidosis. Etiology, pathogenesis, morphology. Clinical picture, diagnosis, differential diagnosis of lesions of lung tissue and intra-thoracic lymph nodes. Treatment, prognosis, rehabilitation
18.	Hemoptysis and pulmonary hemorrhage. Features of pulmonary blood supply. Sources of bleeding. Etiology. Diseases accompanied by hemoptysis. Differential diagnosis. Tactics of patient management.
19.	Respiratory failure. Types: acute, chronic. Obstructive and restrictive types. Diagnosis, clinical and functional signs, typical diseases. Severe course of acute respiratory failure: acute respiratory distress syndrome, causes, diagnosis, differential diagnosis, treatment. Severe course of acute respiratory failure: asthmatic status, principles of diagnosis and treatment.
20.	Diseases of the cardiovascular system. Research methods in cardiology. Methods of physical examination.
21.	Laboratory diagnostic methods. Methods of functional diagnostics: electrocardiography, Holter ECG monitoring, daily blood pressure monitoring, stress tests. Instrumental diagnostics in cardiology: electrocardiography, echocardiography, X-ray examination methods, catheterization of the heart cavities and coronary angiography, radionuclide diagnostics, computed tomography, nuclear magnetic resonance, positron emission tomography - indications, technique, types of techniques used, diagnostic capabilities, choice of research method for a specific nosology.
22.	Coronary heart disease (CHD). Classification according to ICD-10. The concept of acute and chronic forms of coronary heart disease. Epidemiology, natural course and prognosis. Modern assessment of the degree of cardiovascular risk. The concept of modifiable and unmodifiable risk factors. Modern prevention, rehabilitation, medical examination, ITU (medical and social expertise). Features of the course of the disease in Covid infection.

23.	Acute forms of coronary heart disease. Unstable angina pectoris: definition, classification. Correlation of the concepts of "Acute coronary syndrome", "Unstable angina" and "Myocardial infarction". Acute coronary syndrome. Forms of acute coronary syndrome. Etiology. Clinical picture. Diagnostics. Tactics of management of ACS patients without ST segment elevation. Tactics of management of ACS patients with ST segment elevation. The course and outcomes of ACS. Coronary revascularization: general principles, types of interventions, tactics of intervention selection, complications
24.	Myocardial infarction (MI): etiology, pathogenesis, pathomorphology. Coronary blood supply. Modern classification of IM: types, stages of IM. Definition of localization of IM. Diagnostic criteria. Differential diagnosis. Atypical clinical forms of myocardial infarction. Variants of hemodynamic changes in acute MI. Visualization methods for myocardial infarction. Modern tactics of patient management. Restoration of coronary blood flow. Coronary revascularization: general principles, types of interventions, tactics of intervention selection, complications. Diagnosis and treatment of early and late complications of myocardial infarction. Rehabilitation of patients with myocardial infarction, ITU.
25.	Postinfarction cardiosclerosis: clinical options and course. Left ventricular aneurysm: clinic, diagnosis, treatment. Ischemic syndromes. Ischemic cardiomyopathy: stages of development, diagnosis, treatment.
26.	Syncopal states. Arterial hypotension: etiology, pathogenesis, prognosis, management tactics. Causes and differential diagnosis of syncopal conditions. Sudden cardiac death: definition, cause, risk groups, prevention. Cardiopulmonary resuscitation
27.	Hypertension. Etiology of hypertension, risk factors, pathogenesis. Classification, clinic, complications. Risk groups. Diagnostics, differential diagnostics. Hypertensive crises, classification, clinic, principles of treatment. Features of the course of hypertension in children, adolescents and the elderly. Arterial hypertension during pregnancy and in postmenopausal women. Prevention and treatment of hypertension, rehabilitation, ITU issues
28.	Definition of cardiomyopathy (CMP). Classification of CMP according to the etiological (American approach) and morphological (European approach) principle. Primary and secondary CMPs. Classification of primary CMPs. Etiology of secondary CMPs. Types of KMP according to the European classification.
29.	Acquired heart defects. Stenosis of the left atrioventricular orifice. Etiology and pathogenesis of stenosis of the left atrioventricular orifice. Changes in hemodynamics. Clinic. Diagnosis and determination of the severity of stenosis. Complications. Management tactics of patients
30.	Mitral insufficiency. Etiology of acute and chronic mitral insufficiency. Changes in hemodynamics. Clinic. Determination of the degree of mitral regurgitation. Diagnostics. Complications. Management tactics of patients
31.	Aortic valve stenosis. Types of aortic valve stenosis. Etiology. Malformations of the aortic valve. Hemodynamic changes in aortic stenosis. Diagnosis and determination of the severity of the defect. Differential diagnosis. Treatment. Insufficiency of the aortic valve. Etiology of acute and chronic aortic insufficiency. Changes in hemodynamics. Clinic. Determination of the severity of aortic regurgitation. Diagnostics. Complications. Tactics of management of patients.
32.	Congenital heart defects. Classification. Open arterial duct, atrial septal defect, ventricular septal defect, pulmonary artery stenosis, aortic stenosis, Ebstein anomaly, tetrad of Fallot, Eisenmenger syndrome. Mitral valve prolapse. Clinical picture. Instrumental diagnostic methods. Indications for surgical treatment. Prevention. Rehabilitation.
33.	Disturbances of the rhythm and conduction of the heart. Etiology and pathogenesis of rhythm disturbances. Diagnosis of rhythm disorders: anamnesis, physical data, ECG, CHPEP, EFI. Tachycardia with narrow and wide QRS complexes is a differential diagnosis. Classes of antiarrhythmic drugs. Indications for treatment. Medical and electrical cardioversion. Surgical methods of treatment. Etiology and pathogenesis of conduction disorders, classification. Clinical and electrocardiographic diagnostics. Features of the course in old age. Medical treatment, indications for temporary and permanent electrical pacing. Prevention of rhythm and conduction disorders. Rehabilitation. ITU
34.	Heart failure. Etiology, pathogenesis, classification of acute and chronic heart failure. Clinical variants of heart failure. Features of the course in old age. Diagnosis and differential diagnosis. Modern tactics of patient management. Prevention. Rehabilitation. ITU. The course of CHF in patients who have had Covid infection

35.	General issues of rheumatic diseases. International classification. Epidemiology. Types of inheritance. Pathomorphology. Methods of examination of patients with rheumatic diseases. Differential diagnosis of articular syndrome.
36.	Research methods in gastroenterology. Clinical syndromes in gastroenterology: dysphagia, heartburn, belching, nausea, vomiting, dyspepsia, malabsorption, maldigestion, constipation, diarrhea, abdominal pain, bleeding from the upper and lower gastrointestinal tract. Laboratory syndromes in gastroenterology and hepatology. Serological research methods, ELISA, PCR, immunohistochemistry, genetic analysis. Instrumental research methods in gastroenterology, the role of individual methods in the diagnosis of gastrointestinal diseases: pH-metry, intraluminal ionometry, fractional duodenal probing, endoscopy, ultrasound, CT, MRI, PET, scintigraphy, biopsy of the mucous membrane of hollow organs, liver biopsy, angiography, radiography of the biliary tract.

#### List of main and additional literature:

##### Main literature:

Internal diseases. Textbook: in 2 volumes. Volume 2 / ed. edited by A. I. Martynov, J. D. Kobalava, S. V. Moiseev. – 4th ed. – Moscow: GEOTAR-Media, 2021

##### Additional literature:

1. Anemia. Brief guide for practitioners of all specialties / edited by O.A. Rukavitsyn. – M.: GEOTAR-Media, 2018.
2. Allergology and Immunology: national Guide/ edited by R. M. Khaitova, N. I. Ilyina. – M.: GEOTAR-Media, 2017.
3. Arterial hypertension in adults. Clinical recommendations/ Russian Society of Cardiology – 2020.
4. Gastroenterology. National Leadership / edited by V. T. Ivashkin, T. L. Lapina – Moscow: GEOTAR-Media, 2018.

##### Internet resources:

<http://marc.rsmu.ru:8020/marcweb2/>  
<https://www.rosmedlib.ru/book/ISBN9785970428306.html>  
[https://scardio.ru/content/Guidelines/Clinic\\_rek\\_AG\\_2020.pdf](https://scardio.ru/content/Guidelines/Clinic_rek_AG_2020.pdf)  
<http://www.edu.ru>  
<http://www.medicina.ru>  
<http://www.journals.uchicago.edu/JAD/home.html>

#### Monitoring and evaluation of learning outcomes

##### The content of the rating system for assessing student performance

The rating assessment of students' knowledge in each academic discipline, regardless of its total labor intensity, is determined on a 100 (one hundred) - point scale and includes current, boundary, intermediate and final control.

The distribution of rating scores between types of control is established in the following ratio (according to the table of the score-rating system of assessments):

Form of control				
current (CC)*	boundary control (BC)**	mid-term exams (MC)***	Final /exam (FE)	Discipline Rating (RD)
0-100 points	0-100 points	0-100 points	0-100 points	0-100 points, with the translation of points into a letter designation

Note:

\*  $TK(middle) = \frac{\sum_1^n \times point}{\sum_1^n}$ , where n is the number of types of classroom and extracurricular work of students in the discipline;

\*\*  $PK(middle) = \frac{\sum_1^n \text{credit} \times \text{point}}{\sum_1^n \text{credits}}$ , where n is the number of modules (credits) in the discipline;

\*\*\*  $PK(middle) = \frac{\sum_1^n \times point}{\sum_1^n}$ , where n is the number of intermediate controls (2 controls per semester: in the middle and at the end of the semester) by discipline;

\*\*\*\*  $IK$  – examination conducted at the end of the study of the discipline

;

\*\*\*\*РД =  $\frac{TK_{cp}+PK_{cp}+IK_{cp}+IK}{4}$ , the final rating of the results of all types of control at the end of the discipline;

GPA =  $\frac{\sum_1^n \times \text{балл}}{\sum_1^n}$  where, n is the number of disciplines in the semester (for the past period of study).

A student who has not passed the current, boundary and intermediate controls to the final control (exam) is not allowed.

**The current control** is carried out during the period of classroom and independent work of the student on time according to the schedule, at the end of the study of the discipline, the average score of the current control (CC) is calculated. *Forms of current control can be:*

- testing (written or computerized);
- performance of individual homework assignments, abstracts and essays;
- student's work in practical (seminar) classes;
- various types of colloquia (oral, written, combined, express, etc.);
- control of performance and verification of reporting on laboratory work;
- visiting lectures and practical (seminar, laboratory) classes;
- Incentive rating (up to 10 points).

Other forms of current monitoring of results are also possible, which are determined by the teachers of the department and recorded in the work program of the discipline.

**The frontier control** is carried out in order to determine the results of the student's development of one credit (module) as a whole. *Frontier control* should be carried out only in writing, at the end of the study of the discipline, the average score of boundary control (BC) is calculated. As forms of *frontier control* of the training module, you can use:

- testing (including computer testing);
- interview with written fixation of students' answers;
- test.

Other forms of intermediate control of results are also possible.

**Intermediate control (mid-term exams)** is carried out in order to check the completeness of knowledge and skills in the material in the middle and end of the semester (2 times per semester) of studying the discipline, by the end of the study of the discipline, the average score of intermediate control (PCsr) is calculated, *forms of intermediate control (mid-term exams) can be:*

- testing (including computer testing);
- interview with written fixation of students' answers;
- test.

Other forms of intermediate control of results are also possible.

**The final control** is carried out during the session, by conducting an exam, it can be carried out in the following forms:

- testing (including computer testing);
- written exam (ticketing system).

### Correspondence of the point-rating system of assessments used by the institute and the assessments of the European system for the transfer of credit units, labor intensity (ECTS)

Grade						Criterion
System of letters	digital system	Traditional system	Points (%)	Scored points (max - 100)	Evaluation by discipline without an exam	
A	4	5	95-100	95-100	Credited/ passed	"Excellent" - deserves a student who has shown a deep, systematic and comprehensive knowledge of the educational material, who freely performs practical tasks, who has mastered the recommended basic and additional literature on the discipline
A-	3,67		90-94	90-94		"Excellent" - deserves a student who has shown a deep, systematic and comprehensive knowledge of the educational material, who freely performs practical tasks, who has mastered the recommended basic literature on the discipline, but is not familiar with additional literature

B+	3,33	4	85-89	70-89		"Good" - exhibited to a student who has shown a systematic and comprehensive knowledge of the educational material, able to independently replenish and update this knowledge in the course of training, performing practical tasks, familiar with the main literature on the discipline
B	3,0		80-84			"Good" is given to a student who has shown a systematic and comprehensive knowledge of the educational material, who is able to independently replenish this knowledge in the course of training, performing practical tasks, but not fully familiar with the main literature on the discipline
B-	2,67		75-79			"Good" - is given to a student who has shown the systematic nature of knowledge in the discipline, who is able to independently replenish this knowledge in the course of training, performing practical tasks, but not fully familiar with the main literature on the discipline
C+	2,33		70-74			"Satisfactory" - is given to a student who does not have a systematic nature of knowledge in the discipline, who is not capable of independently replenishing and updating knowledge in the course of further education, performing practical tasks with errors
C	2,0	3	65-69	50-69		"Satisfactory" - is given to a student who made mistakes in completing assignments, but who has the necessary knowledge to eliminate them under the guidance of a teacher
C-	1,67		60-64			"Satisfactory" - is set to a student who made errors in the performance of tasks, but who has the possible knowledge to eliminate them under the guidance of a teacher
D+	1,33		55-59			"Satisfactory" - is set to a student who made errors in the performance of tasks, who does not have the necessary knowledge to eliminate them
D-	1,0		50-54			Satisfactory" - is given to a student who has made significant errors in the performance of tasks, who does not have the necessary knowledge to eliminate them
FX	0,5		25-49			Less of 50
F	0	0-24	"Unsatisfactory" - is set to a student who has not completed the task, does not have the necessary knowledge to eliminate them, even under the guidance of a teacher			

### Academic achievement requirements:

Attendance by students of all classroom classes without delay is mandatory.

In case of absence, classes are worked out in the order established by the dean's office.

If there are three passes, the teacher has the right not to allow the student to attend classes until the issue is administratively resolved.

If the absence of classes is more than 20.0% of the total number of classes, the student automatically enters the summer semester.

### Note to the student:

- ✓ regularly review lecture material;
- ✓ Do not be late and do not miss classes;
- ✓ work off missed classes if you have permission from the dean's office;
- ✓ Actively participate in the classroom (individually and in groups;)
- ✓ timely and fully complete homework assignments;
- ✓ submit all assignments within the time specified by the teacher;
- ✓ independently study the material in the library and at home;
- ✓ timely and accurately fulfill the tasks of the teacher, individual tasks for the IWS to achieve learning outcomes;
- ✓ to master the basic and additional literature necessary for the study of the discipline;
- ✓ performing tasks, the student should not copy or reproduce the work of other students, scientists, practitioners, plagiarism;
- ✓ develop their intellectual and oratory skills;

In case of non-compliance with the requirements of the Memo, the student will be penalized in the form of deducting points (one point for each violated item).

If the requirements of the Memo are fully met, the student is encouraged in the form of an additional 10 points to the final control in the discipline.

### Academic Integrity, Conduct and Ethics Policy:

- turn off your cell phone during class;
- Be polite;
- respect other people's opinions;

- formulate objections in the correct form;
- do not shout or raise your voice in the audience;
- independently complete all semester assignments;
- Eliminate plagiarism from your practice;

### **Methodical instructions.**

It is recommended to organize the time required to study the discipline as follows:

***When preparing for a practical lesson***, you must first read the abstract with the teacher's explanations.

***When performing exercises***, you must first understand what you want to do in the exercise, then proceed to its implementation.

***Literature work***. The theoretical material of the course becomes more understandable when books are studied in addition to the abstract. After studying the main topic, it is recommended to perform several exercises.

***Preparation for boundary and intermediate controls***. In preparation for the boundary and intermediate control, it is necessary to study the theory: the definitions of all concepts before understanding the material and independently do several exercises.

***Independent work of students*** is organized on all studied topics of each section. Independent work is carried out in the form of:

- work in Internet sites;
- work with basic and additional literature;
- fulfillment of written assignments;
- preparation of reports, abstracts, tables and posters on