



Некоммерческое образовательное учреждение  
Учебно-научно-производственный комплекс  
«Международный университет Кыргызстана»

Система менеджмента качества  
Учебно-методический комплекс дисциплины «Пульмонологии»  
ООП «Лечебное дело» МШМ МУК



# Syllabus

## OF THE DISCIPLINE «PULMONOLOGY»

Main educational program

specialty of **560001 General Medicine (for foreign citizens)**

*(code, direction name / specialty)*

qualification of the graduate: general practitioner

*(the qualification of the graduate is indicated in accordance with SES HPE)*

Full-time education

Course 3

Semester 6

Credit / Exam

Total curriculum credits 1.46

Work program developer: Zheenbekov T.A., assistant

*(position, full name)*

Reviewed and approved at a meeting of the department of Therapy

Minutes № \_\_\_\_ from «\_\_\_\_» \_\_\_\_\_ 2021

Head of the Department Baitova G. M.

*(full name, signature)*

**Bishkek 2021**



## 1. The work program of the academic discipline

### 1.1.Explanatory note

- **Mission of the ISM IUK** – *training of competent specialists in the field of medicine, consistent with international standards and traditions of medical ethics, ready for continuous professional growth using modern achievements of science and practice, to solve public health problems.*

#### **Annotation of the academic discipline**

The AMC for the "Nephrology" discipline is compiled in accordance with the Regulations on the Academic and Methodological Complex of the discipline, approved by the Protocol of the Academic Council No. 6 of October 20, 2020, by the Addendum to the Regulations on the modular grade-rating system for assessing the knowledge of students in the NCEI ESPC "IUK" (Protocol No. 42 of 07.26.2018, as well as on the basis of the State educational standard of higher professional education in the direction of "Medicine", approved by the Government Decree of 2015. The AMC of the "Nephrology" discipline was developed for third-year students in the direction of "General Medicine" 560001 in compliance with the requirements of the State Educational Standard of Higher Professional Education of the Ministry of Education and Science of the Kyrgyz Republic.

There is not a single condition and disease in which the kidneys are not "interested". In this case, most often, the dysfunction is masked by the symptoms of the underlying disease, or it proceeds latently. Timely identification of the main renal symptoms, verification of the disease and adequate treatment will not only improve the patient's quality of life, but will reduce the rate of progression of chronic renal failure of the natural outcome of all chronic diseases. Studying the discipline of nephrology will expand the understanding of the causes, the variety of manifestations, the subtleties of choosing therapy for various, currently most frequent injuries. This knowledge will be useful in any branch of medicine, regardless of the chosen specialization in the future.

The study of the discipline in the 3rd year is necessary for the preparation of a general practitioner who knows the basics of clinical research of a nephrological patient with subsequent symptoms and syndromes, who knows the basics of etiology, clinical picture, classification, treatment of the main, most common diseases of the kidneys and urinary tract and their prevention.



## • Goals and objectives of the discipline

**The purpose** of the training: to work out the skills of recognizing diseases, understanding their causes and mechanisms of development, choosing the tactics of patient management.

**Tasks:** to be able to identify the main renal syndromes, draw up a plan for laboratory and instrumental examination of the patient, formulate a diagnosis in accordance with modern classifications, outline a rational pharmacotherapy of the disease

## • Place of discipline in the structure of MEP (prerequisites, postrequisites).

Requirements for the preliminary preparation of the student:

To study this academic discipline (module), you need the following knowledge, skills and abilities formed by previous disciplines:

- Pathophysiology, clinical pathophysiology
- Propedeutics of internal diseases
- Pharmacology
- Pathological anatomy
- Psychology and pedagogy
- Normal physiology

Subsequently, the knowledge gained in the course of studying the discipline "Nephrology" will be necessary in the study of disciplines: "Internal medicine", "Polyclinic therapy", production practice "Physician assistant".

## Competencies of students, formed as a result of mastering discipline, the planned results of mastering the discipline.

The study of this academic discipline is aimed at the formation of the following students general cultural (GC), general professional (GPC) and professional (PC) competencies:

	code / content of competency	As a result of studying the academic discipline, students must to:
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2	<p><b>PC-2</b> - is able and ready to conduct and interpret a survey, physical examination, clinical examination, the results of modern laboratory and instrumental studies, to write a medical record of an adult outpatient and inpatient.</p>	<p><b>know:</b> - the basics of organizing outpatient and inpatient care for children, adolescents and adults, modern organizational forms of work and diagnostic capabilities of outpatient services; <b>be able to:</b> - collect anamnesis; interview the patient and his relatives, conduct a physical examination of the patient of various ages (examination, palpation, auscultation, blood pressure measurement, determination of pulse characteristics, respiratory rate, etc.); <b>master:</b> - methods of general clinical examination of patients;</p>
3	<p><b>PC-3</b> - is able to conduct pathophysiological analysis of clinical syndromes, substantiate pathogenetically justified methods (principles) of diagnosis, treatment, rehabilitation and prevention among adults and children, taking into account their age and sex groups;</p>	<p><b>know:</b> - the concepts of etiology, pathogenesis, morphogenesis, pathomorphosis of the disease in an adult and adolescent, the principles of classification of diseases; basic concepts of general nosology; <b>be able to:</b> - interpret the results of the most common methods of laboratory and functional diagnostics, thermometry to identify pathological processes in human organs and systems; <b>master:</b> - interpretation patients' results of laboratory, instrumental diagnostic methods;</p>
<b>Diagnostic activity:</b>		
6	<p><b>PC-13</b> - is able to identify in patients the main pathological symptoms and syndromes of diseases, using knowledge of the basics of biomedical and clinical disciplines, taking into account the course of pathology in 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 algorithm for making a diagnosis</p>	<p><b>know:</b> - functional systems of the human body, their regulation and self-regulation when exposed to the external environment in normal and pathological processes; the structure and function of the immune system in adults and adolescents, its age characteristics, mechanisms of development and functioning, the main methods of immunodiagnostics, methods for assessing the immune status and indications for the use of immunotropic therapy; <b>be able to:</b> - analyze the histophysiological assessment of the state of various cellular, tissue and organ structures in patients; <b>master:</b> - interpretation patient's results of laboratory, instrumental diagnostic methods;</p>



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	(main, concomitant, complications), taking into account the ICD-10, carry out the main diagnostic measures to identify urgent and life-threatening conditions;	
<b>Treating activity:</b>		
7	<b>PC-14</b> - is able to perform basic therapeutic measures for the most common diseases and conditions in adults and children;	<p><b>know:</b> - the clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in children, adolescents and adults;</p> <p><b>be able to:</b> - to substantiate the need for clinical and immunological examination of a sick adult and adolescent, to analyze the effect of drugs in terms of the totality of their pharmacological properties and the possibility of their use for therapeutic treatment of patients of different ages;</p> <p><b>master:</b> - an algorithm for setting a preliminary diagnosis of patients with their subsequent referral for additional examination and to specialist doctors; an algorithm for setting a detailed clinical diagnosis.</p>

### **Requirements for the level of preparation of the student who completed the studying the program of this discipline.**

As a result of studying the basic part of the cycle, the student have to:

#### **know:**

- the definition of the disease, etiology, risk factors (RF), pathogenesis, pathomorphology, classification, clinical picture, laboratory and instrumental diagnostics, principles of treatment;
- the etiology, pathogenesis, clinic, diagnostic methods and emergency care of urgent conditions;
- to list the complications of diseases.



- the principles of drug therapy, indications and contraindications for the use of drugs (Treatment Agent).
- the prognosis of diseases, RF of development of life-threatening conditions.

**Understand:**

- the pathogenesis of the formation of certain syndromes and symptoms in nephrology, pathomorphology of the main syndromes;
- the results of laboratory and instrumental diagnostic methods;
- the principles of emergency care for nephrological patients;
- the principles of drug therapy and principles of treatment control.

**Able to use:**

- the methods of physical examination for making a preliminary diagnosis and determining a plan for the examination of a nephrological patient;
- the results of laboratory and instrumental studies in determining the tactics of treatment;
- the data of an objective examination and the results of the patient's study in writing a student's medical history with a substantiation of the clinical diagnosis.

**Able to carry out:**

- the recognition and correct diagnosis of the most common nephrological syndromes in their typical course;
- the assessment of the activity of the pathological process, its form, stage and phase of the course in accordance with the officially approved classifications, the severity of complications;



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- the drawing up a plan for laboratory and instrumental examination to confirm the alleged diagnosis and interpret the results obtained;
- the formulation a detailed clinical diagnosis, guided by the modern classification of diseases;
- the detailed diagnosis in a particular patient, exactly, the etiology, mechanism of development and pathomorphology of the disease, to highlight complications.

**Able to analyze:**

- the substantiation of the underlying disease of the clinical diagnosis in a particular patient with an assessment of the examination results and identify the criteria for the diagnosis of this disease;
- the substantiation of the etiology of the disease in the patient;
- the appointment of adequate individual therapy by filling out the "Prescription sheet" and "Temperature sheet" of the supervised patient;
- the clinical manifestations of some emergency conditions, to carry out a detailed condition, urgent diagnostics and have the skills to provide emergency medical care.

**Able to evaluate:**

- the scheme of non-and drug treatment of the patient in accordance with the diagnosis and morphological changes, including determining the indications and therapeutic contraindications for surgical intervention, and its urgency;
- the prognosis of the disease for the life of a particular patient;
- measures of primary and secondary prevention; the latter (including) in the supervised patient;

**Master:**

- the methodology for collecting complaints and anamnesis of the patient;



- the methods of propaedeutics of various body systems: examination, palpation, percussion and auscultation of internal organs;
- the skills of interpreting the anamnesis data, objective examination of the patient, his laboratory and instrumental data;
- the skills of presenting an independent point of view, analysis and logical thinking, public speech, ethical argumentation, conducting discussions and round tables, the principles of medical deontology and medical ethics;
- the skills of informing the patient and their relatives;
- the foreign language in the volume for communication and obtaining information from foreign sources.

### 1.1. Recommended educational technologies

The following types of educational work are used: lecture-visualization, lecture, press conference, trainings, debates among students, master classes, discussions of various formats, business and role-playing educational games, small group method, classes using simulators, dummies, imitators, analysis of clinical cases, preparation and defense of medical history, participation in research work, conducting subject Olympiads, preparation and defense of abstracts.

### 1.2. The scope of the discipline and types of academic work

Form of education – full time

Academic plan for 2021	6 sem.	Total	
		in hours	in credits
<b>Total labor intensity</b>	<b>44</b>	<b>44</b>	<b>1,46</b>
<b>Classroom works</b>	28	28	0.93
Lectures	10	10	0.33
Practical classes	18	18	0.6
Independent work	16	16	0.53
SIWT	16	16	0.53
<b>Type of final control</b>			Exam





## 1.4 Structure of Discipline

### 1.4.1 Thematic plan for studying the Discipline.

№	Name sections and topics disciplines (lectures and workshops)	Auditory lessons				Total hours	SIWT	Student independent work	Formed competence	Used educational technologies, methods and methods of teaching	Forms of current and midterm control academic performance
		lectures	seminars	practical занятия	laboratory работы						
	Module 1										
1	<i>Topic 1. Introduction. Characteristics of the main complaints, anamnesis of patients with pathology of the respiratory system. Features of examination and additional research methods in pulmonology. Principles of Treatment and Prevention of Patients with Respiratory System Diseases</i>			2		2	1	1	<i>PK-2, PK-3, PK-11, PK-12, PK-13, PK-14, PK-15, PK-16, PK-19</i>		
2	<i>Topic 2. Bronchial asthma</i>	2		2		4	1	1	<i>PK-2, PK-3, PK-11, PK-12, PK-13, PK-14, PK-15, PK-16, PK-19</i>		
3	<i>Topic 3. Chronic obstructive pulmonary disease</i>	2		2		4	1	1	<i>PK-2, PK-3, PK-11, PK-12, PK-13, PK-14, PK-15, PK-16, PK-19</i>		
4	<i>Topic 4. Pneumonia</i>	2		2		4	1	2	<i>PK-2, PK-3, PK-11, PK-12, PK-13, PK-14, PK-15, PK-16, PK-19</i>		
5	<i>Topic 5. Pleurisy</i>	2		2		4	1	1	<i>PK-2, PK-3, PK-11, PK-12, PK-13, PK-14, PK-15, PK-16, PK-19</i>		
6	<i>Topic 6. Bronchiectasis.</i>	2		2		4	1	1	<i>PK-2, PK-3, PK-11, PK-</i>		



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									12, PK-13, PK-14, PK- 15, PK-16, PK-19		
7	Topic 7. Idiopathic fibrosing alveolitis.	2		2		4	1	1	PK-2, PK-3, PK-11, PK- 12, PK-13, PK-14, PK- 15, PK-16, PK-19		
8	Topic 8. Pulmonary heart	2		2		4	1	1	PK-2, PK-3, PK-11, PK- 12, PK-13, PK-14, PK- 15, PK-16, PK-19		
9	Topic 9. Respiratory failure	2		2		4	2	1	PK-2, PK-3, PK-11, PK- 12, PK-13, PK-14, PK- 15, PK-16, PK-19		
10	Offset			2		2					
	Total hours by discipline:	<b>16</b>		<b>20</b>		<b>36</b>	<b>11</b>	<b>11</b>			

**Abbreviation of the designations of educational technologies, methods and methods of teaching:**

traditional lecture (L), lecture-visualization (LV), problem lecture (PL), lecture-press conference (LPC), lesson-conference (LC), training (T), debates (D), brainstorming (BS), master class (MC), round table (RT), activation of creative activity (ACA), regulated discussion (RD), forum type discussion (FD), business and role-based educational game (B, RBEG), small group method (SGM), classes using simulators, simulators (SM), computer simulation (CS), analysis of clinical cases (ACS), preparation and protection of medical history (PMH), use of computer training programs (CTP), interactive atlases (IA), attendance at medical conferences, consultations (AMC), participation in scientific and practical conferences (PSPC), congresses, symposia (CS), student educational research work (SERW), subject Olympiads (SO), preparation of written analytical works (PWAW), preparation and defense of referats (PDR), project technology (PT), excursions (E), distance educational technologies (DET).

Reducing the forms of current and midterm monitoring of progress: T - testing, Pr - assessment of the development of practical skills (abilities), ZS - solving situational problems, KR - control work, KZ - control task, IB - writing and protecting a medical history, CL - writing and protection of the curator's list, R - writing and defense of the abstract, C - interview on control questions, D - preparation of a report, etc.



### 1.4.2. Organization of Student's Individual Work

SIW topic	часов	SIW topic with teacher	часов
<p>Propedeutics for respiratory diseases. Functional research methods in pulmonology (spirometry, peak flowmetry)</p> <p><b>Working with literature:</b></p> <p>1. Anthony S.Fauci, Braunwald, Kasper, Longo, Jameson, Loscalzo Harissons Principles of Internal Medicine 2012, 17thEdition</p> <p>2. Graham Douglas&amp;FionaNicol Macleod's Clinical examination 13th Edition</p> <p>3. Stuart Ralston, Ian Penman, Mark Strachan, Richard Hobson Davidsons Principles &amp; Practice Of Medicine 23th Edition</p> <p>4. O.N. Kovalyova, T.V. Ashcheulova – Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.</p> <p>5. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal Medicine: Syndromes; textbook for English learning Students of higher medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;</p> <p>6. Bates Guide to Physical Examination and History taking LWW, 11 ed,2012</p>	3	<p>Radioisotope scintigraphy. Chest scan, diagnostic value</p> <p><b>Working with literature:</b></p> <p>1. Anthony S.Fauci, Braunwald, Kasper, Longo, Jameson, Loscalzo Harissons Principles of Internal Medicine 2012, 17thEdition</p> <p>2.Graham Douglas&amp;FionaNicol Macleod's Clinical examination 13th Edition</p> <p>3. Stuart Ralston, Ian Penman, Mark Strachan, Richard Hobson Davidsons Principles &amp; Practice Of Medicine 23th Edition</p> <p>4. O.N. Kovalyova, T.V. Ashcheulova –Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.</p> <p>5. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal Medicine: Syndromes; textbook for English learning Students of higher medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;</p> <p>6. Bates Guide to Physical Examination and History taking LWW, 11 ed,2012</p>	3



<p>The mechanism of development of bronchial obstruction in COPD</p> <p><b>Working with literature:</b></p> <p>1. O.N. Kovalyova, T.V. Ashcheulova – Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.</p> <p>2. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal Medicine: Syndromes; textbook for English learning Students of higher medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;</p> <p>3. Bates Guide to Physical Examination and History taking LWW, 11 ed,2012</p>	2	<p>Treatment of bronchial asthma in a mountain climate</p> <p><b>Working with literature:</b></p> <p>1. O.N. Kovalyova, T.V. Ashcheulova – Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.</p> <p>2. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal Medicine: Syndromes; textbook for English learning Students of higher medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;</p> <p>3. Bates Guide to Physical Examination and History taking LWW, 11 ed,2012</p>	2
<p>Principles of antibiotic therapy for community-acquired pneumonia</p> <p><b>Working with literature:</b></p> <p>1. O.N. Kovalyova, T.V. Ashcheulova – Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.</p> <p>2. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal Medicine: Syndromes; textbook for English learning Students of higher medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;</p>	2	<p>Pathogenesis of cor pulmonale: Euler-Liljestrand phenomenon</p> <p><b>Working with literature:</b></p> <p>1. O.N. Kovalyova, T.V. Ashcheulova – Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.</p> <p>2. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal</p>	2



<p>3. Bates Guide to Physical Examination and History taking LWW, 11 ed,2012</p> <p>Pathophysiology of PAH</p> <p><b>Working with literature:</b></p> <p>1. O.N. Kovalyova, T.V. Ashcheulova – Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.</p> <p>2. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal Medicine: Syndromes; textbook for English learning Students of higher medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;</p> <p>3. Bates Guide to Physical Examination and History taking LWW, 11 ed,2012</p> <p>Methods for functional diagnostics of the respiratory system. Respiratory function in various types of pulmonary insufficiency.</p> <p><b>Working with literature:</b></p> <p>1. O.N. Kovalyova, T.V. Ashcheulova – Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.</p> <p>2. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal Medicine: Syndromes; textbook for English learning Students of higher</p>	<p>2</p> <p>2</p> <p>2</p>	<p>Medicine: Syndromes; textbook for English learning Students of higher medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;</p> <p>3. Bates Guide to Physical Examination and History taking LWW, 11 ed,2012</p> <p>Determination of blood gas composition</p> <p><b>Working with literature:</b></p> <p>1. O.N. Kovalyova, T.V. Ashcheulova – Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.</p> <p>2. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal Medicine: Syndromes; textbook for English learning Students of higher medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;</p> <p>3. Bates Guide to Physical Examination and History taking LWW, 11 ed,2012</p> <p>Methods for functional diagnostics of the respiratory system. Respiratory function in various types of pulmonary insufficiency.</p>	<p>2</p>
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<p>medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;</p> <p>3. Bates Guide to Physical Examination and History taking LWW, 11 ed,2012</p>		<p><b>Working with literature:</b></p> <p>1. O.N. Kovalyova, T.V. Ashcheulova –Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.</p> <p>2. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal Medicine: Syndromes; textbook for English learning Students of higher medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;</p> <p>3. Bates Guide to Physical Examination and History taking LWW, 11 ed,2012</p>	<p><b>2</b></p>
<p><b>Итого:</b></p>	<p><b>11</b></p>		<p><b>11</b></p>

### 1.4.3 Evaluative Assessment Tools

1. Epidemiology of respiratory diseases. Research methods in pulmonology.
2. The role of upper respiratory tract infection in the development of bronchopulmonary diseases.
3. New infections in pulmonology.
4. Pneumonia (etiology, classification, clinical picture).
5. Pneumonia caused by atypical pathogens (differential diagnosis, treatment).
6. Pneumonia (treatment). Principles of antibiotic therapy.



7. Antibiotic resistance: basic mechanisms and ways to overcome them.
8. Complications of pneumonia in the early and late periods. Features of therapy.
9. Differential diagnosis of pneumonia and pulmonary tuberculosis.
10. Tuberculin diagnostics, diaskin test.
11. Chronic obstructive pulmonary disease (etiology, pathogenesis, classification, clinical picture).
12. Pleural effusion. Differential diagnosis. Study of pleural effusion.
13. Bronchial asthma (definition, epidemiology, pathophysiology, clinical picture, diagnosis).
14. Differential diagnosis of allergic and non-allergic asthma.
15. Basic therapy for asthma. Stepwise approach.
16. Severe exacerbation of asthma (status asthmaticus): clinical manifestations, complications, treatment.
17. Differential diagnosis of broncho-obstructive syndrome
18. Hyperventilation syndrome: a diagnostic algorithm.
19. Cough, hemoptysis.
20. Bronchiectasis and its complications.
21. Cor pulmonale: modern classification
22. Chronic cor pulmonale. Development pathogenesis. Clinic. Diagnostics. Treatment
23. Modern classification of pulmonary hypertension: design criteria.
24. ODN (definition, classification, differential diagnosis and treatment principles).
25. Chronic DN (definition, classification, differential diagnosis and treatment principles).
26. Indications for oxygen therapy in DN. Respiratory support techniques.



27. Idiopathic pulmonary hemosiderosis: diagnostic algorithm.
28. Exogenous allergic alveolitis: diagnostic algorithm.
29. Idiopathic pulmonary fibrosis (epidemiology, clinical presentation, diagnosis, therapy).
30. Immunological diagnostic methods in pulmonology
31. The concept of biological markers in pulmonology, diagnostic value. 32. Functional research methods in pulmonology.
33. X-ray research methods in pulmonology.
34. The use of GCS in pulmonology. Possible complications.
35. Principles of immunotherapy in pulmonology. Modern approaches to vaccine prevention of acute and exacerbation of chronic lung diseases.

## **1.5. EDUCATIONAL – METHODOLOGICAL AND INFORMATIONAL SUPPORT OF THE DISCIPLINE**

### **List of recommended literature:**

1. Anthony S.Fauci, Braunwald, Kasper, Longo, Jameson, Loscalzo Harissons Principles of Internal Medicine 2012, 17th Edition
2. Graham Douglas & Fiona Nicol Macleod's Clinical examination 13th Edition
3. Stuart Ralston, Ian Penman, Mark Strachan, Richard Hobson Davidsons Principles & Practice Of Medicine 23th Edition
4. O.N. Kovalyova, T.V. Ashcheulova – Vinnytsya Propaedeutics to Internal Medicine: Diagnostics; textbook for English learning Students of higher medical schools; Part 1. Nova Knyha publishers, 2011. – 424 p.
5. O.N. Kovalyova, S. Shapovalova – Vinnytsya Propaedeutics to Internal Medicine: Syndromes; textbook for English learning Students of higher medical schools; Part 2. Nova Knyha publishers, 2011. – 424 p.;
6. Bates Guide to Physical Examination and History taking LWW, 11 ed, 2012

*Указывать не менее 2 – х основных учебников (учебных пособий), преимущественно имеющиеся в библиотеках УНПК «МУК».*

### **Additional literature:**





1. Stephen J. Mcphee, «Current Medical Diagnosis & Treatment». 2009
2. Elsevier «Clinical Examination.A Systematic Guide To Physical Diagnosis » Australia. 2014
3. Tao Le. «First Aids in Internal Medicine» Boards 2 Edition Copyright 2008
4. Schneider, M-J. Introduction to Public Health 3rd Edition. 2011. Jones & Bartlett Publishers,  
Sudbury,Mass.
- 5.ABM Abdullah, MN Alam MRCP, “Long Cases in Clinical Medicine” First Edition: 2013.
- 6.RAlagappan. Chennai, Tamil Nadu Manual of Practical Medicine” Fourth Edition. India.

**The list of resources of the information and telecommunication network "Internet" necessary for mastering the discipline**

1. <http://meduniver.com/Medical/Book/34.html>
2. [www.jaypeebrothers.com](http://www.jaypeebrothers.com)
3. [www.booksmed.com](http://www.booksmed.com)
4. [www.bankknig.com](http://www.bankknig.com)
5. Blaufuss Multimedia:  
<http://www.blaufuss.org>
6. The R.A.L.E. Repository: Respiratory sounds:  
<http://www.rale.ca/Recordings.htm>
7. David Arnall: Pulmonary Breath Sounds:  
[http://faculty.etsu.edu/arnall/www/public\\_html/heartlung/breathsounds/contents.html](http://faculty.etsu.edu/arnall/www/public_html/heartlung/breathsounds/contents.html)
8. Frontiers in Bioscience, Virtual Library: Heart Sounds  
[http://www.lf2.cuni.cz/Projekty/interna/heart\\_sounds/h14/sound.htm](http://www.lf2.cuni.cz/Projekty/interna/heart_sounds/h14/sound.htm)