


Federal State Budgetary Educational Institution of Higher Education  
"Privolzhsky Research Medical University"  
Ministry of Health of the Russian Federation

APPROVED  
Vice-Rector for Academic Affairs  
E.S. Bogomolova  
31 August 2021



## WORKING PROGRAM

Name of the academic discipline: **PHTHISIATRY**

Specialty: **31.05.01 GENERAL MEDICINE**

Qualification: **GENERAL PRACTITIONER**

Department: **PHTHISIOLOGY NAMED AFTER I.S. NIKOLAEV**

Mode of study: **FULL-TIME**

Labor intensity of the academic discipline: **180 academic hours**

Nizhny Novgorod  
2021

The working program has been developed in accordance with the Federal State Educational Standard for specialty 31.05.01 GENERAL MEDICINE approved by Order of the Ministry of Science and Higher Education of the Russian Federation No. 988 of August 12, 2020.


**Developers of the working program:**

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The program was reviewed and approved at the department meeting (protocol No. 14, date 28.04.2021)

Head of the Department, Holder of an Advanced Doctorate (Doctor of Science) in Medical Sciences, full professor

  
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(signature) Shprykov A.S.

« 28 » April 2021.

AGREED

Deputy Head of EMA ph.d. of biology  Lovtsova L.V.

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(signature)

28.04.2021

**1. The purpose and objectives of mastering the academic discipline «Phthisiatry»** (hereinafter – the discipline): the purpose of mastering the discipline is to give students knowledge in the field of phthisiology, taking into account the specifics in their future work. The goals and content of training are determined by the current state of phthisiopulmonology, characterized by an acute situation in the incidence of tuberculosis, when the incidence of this pathology in our country and in a number of other countries is one of the priority tasks of healthcare. In the changing conditions of the organization of anti-tuberculosis activities, deep knowledge of phthisiology is necessary not only for phthisiatricians, but, above all, for general practitioners.

1.1. The purpose of mastering the discipline: participation in forming the relevant competencies UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7.

1.2. Tasks of the discipline:

The main task of the discipline is the assimilation by students of the Faculty of International Medical Education of modern ideas about the etiology and pathogenesis of the development of pulmonary tuberculosis, tuberculosis pathomorphosis in modern conditions, methods of early, timely detection of the disease. The task of the teacher is also to teach students how to conduct tuberculin tests, vaccination. On a specific patient, a department employee teaches students how important it is to correctly collect an anamnesis and various clinical and laboratory data for making a diagnosis. In the classroom, students learn clinical thinking: they make a differential diagnosis with other pulmonary diseases, outline a plan for the complex treatment of the patient and its duration. Social and specific prevention of the disease is given great importance in practical classes on tuberculosis.

1.3. Requirements to the deliverables of mastering the discipline

As a result of completing the discipline, the student should

**Know:**

- organization of TB care in the country, economy and health care management;
- social and epidemiological prerequisites for reducing the incidence of tuberculosis;
- risk factors for tuberculosis;
- epidemiology, tuberculosis statistics;
- organization of anti-epidemic measures for tuberculosis, their reflection in laws, orders, as well as in instructive and methodological recommendations;
- valid accounting and reporting forms on tuberculosis;
- specific and non-specific prevention of tuberculosis;
- tasks of anti-tuberculosis propaganda, methods of health education;
- features of the causative agent of tuberculosis, its biological properties, methods of detection;
- morphology of the lungs and mechanisms of protection of the respiratory apparatus from damaging factors, pathogenesis and pathomorphology of tuberculosis;
- the state of the immune system in tuberculosis;
- respiratory physiology and pathophysiological disorders that occur during a specific infectious process;
- methods of clinical, laboratory, radiological and instrumental examination of a patient with tuberculosis;
- indications and contraindications for bronchoscopy and biopsy in case of tuberculosis and other respiratory pathology;
- clinical classification of tuberculosis, classification of residual changes after tuberculosis;
- clinical and radiological semiotics of the main forms of respiratory tuberculosis and other localizations of a specific process;

- complications of tuberculosis of the respiratory organs and measures to prevent them;
- clinical and radiological semiotics of respiratory diseases similar to tuberculosis;
- features of clinical manifestations and course of tuberculosis, its detection, prevention and treatment in children and adolescents;
- clinical features and principles of diagnosis of extrapulmonary forms of tuberculosis (genitourinary, osteoarticular, peripheral and mesenteric lymph nodes, meninges, skin, eyes and other organs);
- urgent therapeutic measures used in threatening conditions in the clinic of tuberculosis and other pulmonary diseases;
- principles of complex etiotropic therapy of tuberculosis, methods and means of pathogenetic therapy;
  - mechanisms of action, pharmacokinetics of anti-tuberculosis chemotherapy drugs, adverse reactions, measures for their prevention and elimination;
  - indications and principles of sanatorium treatment and rehabilitation of patients with tuberculosis;
  - indications for surgical treatment of patients with tuberculosis;
  - examination of working ability in case of tuberculosis;
  - specific and non-specific prevention of tuberculosis;
  - bases of medical examination of patients with tuberculosis;
  - principles of medical ethics and deontology.
- fundamentals of non-drug therapy (physiotherapy, herbal medicine, quantum therapy, physical therapy and other non-drug methods of treatment) for tuberculosis and other bronchopulmonary pathologies;
  - indications and contraindications for sanatorium-and-spa treatment for tuberculosis;
  - the basics of rational nutrition of healthy individuals, the principles of diet therapy for tuberculosis patients.

**Be able to:**

- conduct a comprehensive clinical examination of the patient, and on this basis determine: a preliminary diagnosis, the severity of the condition, urgent measures, an additional examination plan, including consultations of other specialists, laboratory and instrumental studies, avoiding unreasonable and dangerous indications and terms of hospitalization, work capacity;
  - verify and/or clarify the directed diagnosis in patients admitted to a hospital or an appointment at a polyclinic;
  - use deontological skills in order to establish positive psychological contact with patients;
  - determine the tactics of managing the patient depending on the nature and severity of the disease: only observation, initial therapy for the first 24 hours, emergency treatment of an acute condition, invitation of other specialists, hospitalization or transfer of the patient to another department.
- competently carry out:
  - effective and safe treatment of patients, including continuous self-treatment and monitoring of chronic patients, as well as primary and secondary prevention of diseases;
  - planned complex treatment of patients, using a regimen, diet, physiotherapy, medications, and to dynamically monitor the patient's condition, the effectiveness and tolerability of the prescribed treatment, and, if necessary, correct it (change the dose and method of administering medications, replacing the latter) .
  - tuberculosis prevention, medical examination, evaluate their results
  - to carry out diagnostics and qualification medical care in emergency conditions in stationary and outpatient conditions, including:
    - clinically identify the type and severity of the emergency;

- determine the tactics of patient management: independent provision of medical care in full; start treatment and call for a consultation with the appropriate specialist doctor;
- conduct, if necessary, an indirect heart massage and artificial respiration, infusion therapy;
- carry out emergency drug therapy according to indications (antibiotics, analgesics, vasopressors, bronchodilators, hormonal drugs, antidotes for poisoning, hemostatic, etc.);
- perform urgent pleural and abdominal puncture, bladder catheterization;
- dynamic monitoring of the state of vital body functions;
- establish indications for the use of resuscitation methods (electropulse therapy, assisted breathing, extracorporeal blood purification, correction of the electrolyte and acid-base state of the blood);
- assess the condition and highlight the leading syndromes in patients in terminal and serious condition;
- carry out sanitary and educational work among the population;
- prepare medical documentation.

**Possess:**

- methods of examination of the respiratory system (anamnesis, examination, percussion, palpation, auscultation);
- method of pleural puncture;
- assessment of pleural fluid analysis;
- endotracheal sanitation;
- method of taking sputum and its clinical analysis, collection of sputum for bacteriological and cytological studies;
- method of setting tuberculin samples and their evaluation;
- implementation of provocative tests with high doses of tuberculin and their evaluation;
- implementation of artificial therapeutic pneumothorax, artificial diagnostic and therapeutic pneumoperitoneum;
- implementation of bronchspirometry and interpretation of the results;
- method of postural and positional bronchial drainage;
- assessment of the acid-base state of the blood;
- evaluation of the results of load tests;
- assessment of cytological and bacteriological examination of sputum;
- interpretation of the results of sputum examination for fungal flora;
- assessment of the study of sputum, bronchial lavage to detect MBT, study of pleural effusion;
- interpretation of immunological status data;
- interpretation of radiographs, linear and computed tomograms of the chest organs, fluorograms;
- evaluation of data from magnetic resonance imaging of the lungs, data from radioisotope examination of the lungs, data from angiopulmonography;
- interpretation of indicators of the diffusion capacity of the lungs;
- interpretation of indicators of bronchspirometry and pneumotachometry;
- interpretation of the results of bronchoscopic examination;
- interpretation of X-ray functional samples of the study;
- interpretation of the main skiological categories (focal shadow, focal shadow, area of lung tissue darkening);
- interpretation of the main radiological symptoms and syndromes in phthisiology;
- basic principles of treatment of tuberculosis of the respiratory organs and diseases associated with it, which include: etiotropic, pathogenetic drug therapy and collapse therapy;
- determination of indications and contraindications for surgical treatment;

· algorithms for making a diagnosis in case of a tuberculin test, with prolonged cough (more than 3 weeks) and prolonged pneumonia, with a symptom complex of signs similar to tuberculosis, with hemoptysis, with effusion in the pleural cavity, when observing persons from risk groups for tuberculosis (sugar diabetes, gastric ulcer, chronic diseases of the bone, genitourinary system, eyes, skin, etc.), with a round shadow in the lung, with cavity formation in the lungs, with pulmonary infiltrates, with pulmonary dissemination, with fever of unknown origin, with increased intrathoracic lymphatic nodes, with enlarged peripheral lymph nodes.

## **2. Position of the academic discipline in the structure of the General Educational Program of Higher Education (GEP HE) of the organization.**

**2.1.** The discipline «**Phthisiatry**» refers to the core part (or *the part formed by the participants of educational relations*) of Block 1 of GEP HE (B1.O.41).

The discipline is taught in 11 (fall) semester 6<sup>th</sup> year of study.

### **2.2. The following knowledge, skills and abilities formed by previous academic disciplines are required for mastering the discipline:**

1. Epidemiology.
2. Clinical pharmacology.
3. Forensic medicine.
4. Life safety.
5. Hospital therapy.
6. Endocrinology.

### **2.3. Mastering the discipline is required for forming the following knowledge, skills and abilities for subsequent academic disciplines:**

1. Polyclinic therapy.
2. Anesthesiology.
3. Resuscitation, intensive therapy.
4. Hospital surgery.
5. Oncology, radiation therapy.
6. Traumatology.
7. Orthopedics.
8. Oncohematology.
9. Rheumatology.
10. Basics of emergency care.
11. Basics of transplantology.
12. Evidence-based medicine.
13. Organizational aspects of the activities of a district doctor.
14. Conflictology.
15. Basics of gastroenterology.
16. Functional diagnostics in the clinic of internal diseases.
17. Clinical immunology.
18. Regenerative medicine.
19. Integrative methods in medicine.



### 3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following universal (UC) or/and general professional (GPC) or/and professional (PC) competencies

№	Competence code	The content of the competence (or its part)	Code and name of the competence acquisition metric	As a result of mastering the discipline, the students should:		
				know	be able to	possess
1.	UC-1	Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy	IUC 1.1 Knows: methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis IUC 1.2 Able to: gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience IUC 1.3 Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems	Methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis	Obtain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience	The ability to explore the problems of professional activity using analysis, synthesis and other methods of intellectual activity; methods of developing an action strategy for solving professional problems
2.	UC-6	Able to identify and implement the priorities of their own activities and ways to improve them based on self-assessment and lifelong learning	IUC 6.1 Knows: the importance of planning long-term goals of activity, taking into account conditions, means, personal opportunities, stages of career growth, time perspective of development of activity and requirements of the labor market; technology and methodology of self-assessment; basic principles of self-education and self-education IUC 6.2 Is able to: determine the priorities of professional activity and ways to improve it on the basis of self-assessment; control and evaluate the components of professional activity; plan independent activities in solving professional problems IUC 6.3 Has practical experience: planning their own professional activities and self-development, studying additional educational programs	The importance of planning long-term goals of activity, taking into account the conditions, means, personal opportunities, stages of career growth, time perspective for the development of activities and labor market requirements; technology and methodology of self-assessment; basic principles of self-education and self-education	Determine the priorities of professional activity and ways to improve it based on self-assessment; control and evaluate the components of professional activity; plan independent activities in solving professional problems	The ability to plan their own professional activities and self-development, study additional educational programs
3.	GPC-1	Able to implement moral and legal norms, ethical and deontological principles in professional activities	IGPC 1.1 Knows: basics of medical ethics and deontology; fundamentals of legislation in the field of healthcare; legal aspects of medical practice IGPC 1.2 Is able to: apply ethical norms and principles of behavior of a medical worker in the performance of their professional duties; knowledge of modern legislation in the field of healthcare in solving problems of professional activity; apply the rules and norms of interaction between a doctor and colleagues and patients (their legal representatives) IGPC 1.3 Has practical experience: solving standard problems of professional activity based on ethical norms and deontological principles when interacting with colleagues and patients (their legal representatives), knowledge of the legal aspects of medical practice	Fundamentals of medical ethics and deontology; fundamentals of legislation in the field of healthcare; legal aspects of medical practice	Apply ethical norms and principles of behavior of a medical worker in the performance of their professional duties; apply knowledge of modern legislation in the field of healthcare in solving problems of professional activity; apply the rules and norms of interaction between a doctor and colleagues and patients (their legal representatives)	Skills for solving standard problems of professional activity based on ethical norms and deontological principles when interacting with colleagues and patients (their legal representatives), knowledge of the legal aspects of medical practice
4.	GPC-5	Able to assess morphofunctional, physiological conditions and	IGPC 5.1 Knows: anatomy, histology, embryology, topographic anatomy, physiology, pathological anatomy and physiology of human organs and	Anatomy, histology, embryology, topographic	Evaluate basic morphofunctional data,	Methods for evaluating basic morphological and functional



		pathological processes in the human body to solve professional problems	<p>systems</p> <p>IGPC 5.2 Able to: evaluate the basic morphological and functional data, physiological conditions and pathological processes in the human body</p> <p>IGPC 5.3 Has practical experience: assessment of basic morphological and functional data, physiological conditions and pathological processes in the human body when solving professional problems</p>	anatomy, physiology, pathological anatomy and physiology of human organs and systems	physiological conditions and pathological processes in the human body	data, physiological conditions and pathological processes in the human body when solving professional problems
5.	GPC-7	Able to prescribe treatment and monitor its effectiveness and safety	<p>IGPC 7.1 Knows: methods of drug and non-drug treatment, medical indications for the use of medical devices for the most common diseases; groups of drugs used to provide medical care in the treatment of the most common diseases; the mechanism of their action, medical indications and contraindications to the appointment; compatibility, possible complications, side effects, adverse reactions, including serious and unforeseen; features of medical care in emergency forms</p> <p>IGPC 7.2 Is able to: develop a treatment plan for patients with the most common diseases in accordance with the procedures for providing medical care, clinical guidelines, taking into account the standards of medical care; prevent or eliminate complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of drugs and (or) medical devices, non-drug treatment</p> <p>IGPC 7.3 Has practical experience in: developing a treatment plan for patients with the most common diseases in accordance with the current procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care; provision of emergency and urgent medical care to patients with the most common diseases, in accordance with the current procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care; selection and prescription of medicines, medical devices with the most common diseases for the treatment of the most common diseases in children and adults in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care; evaluation of the effectiveness and safety of the use of drugs, medical devices and non-drug treatment in patients with the most common diseases; selection and prescription of non-drug treatment for patients with the most common diseases in accordance with the procedures for providing medical care, clinical guidelines, taking into account the standards of medical care; prevention and treatment of complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of drugs and (or) medical devices, non-drug treatment; providing medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life in an emergency form; the use of medicines and medical devices in the provision of medical care in an emergency form</p>	Methods of drug and non-drug treatment, medical indications for the use of medical devices for the most common diseases; groups of drugs used to provide medical care in the treatment of the most common diseases; the mechanism of their action, medical indications and contraindications to the appointment; compatibility, possible complications, side effects, adverse reactions, including serious and unforeseen; features of medical care in emergency forms	Develop a treatment plan for patients with the most common diseases in accordance with the procedures for providing medical care, clinical guidelines, taking into account the standards of medical care; prevent or eliminate complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of drugs and (or) medical devices, non-drug treatment	Methods for developing a treatment plan for patients with the most common diseases in accordance with the current procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care; provision of emergency and urgent medical care to patients with the most common diseases, in accordance with the current procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care; selection and prescription of medicines, medical devices with the most common diseases for the treatment of the most common diseases in children and adults in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care; evaluation of the effectiveness and safety of the use of drugs, medical devices and non-drug treatment in patients with the most common diseases; methods for selecting and prescribing non-drug treatment for patients with the most common diseases in accordance with the procedures for providing medical care, clinical guidelines, taking into account the standards of medical care; methods for the prevention and treatment of complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the

						use of drugs and (or) medical devices, non-drug treatment; providing medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life in an emergency form; methods of using medicines and medical devices in the provision of medical care in an emergency form
6.	PC-1	Able to assess the condition of a patient requiring emergency or emergency medical care	<p>IPC 1.1 Knows: etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; methodology for collecting complaints and anamnesis; physical examination technique (examination, palpation, percussion, auscultation); a list of laboratory and instrumental research methods for assessing the condition, the main medical indications for conducting research and interpreting the results in patients requiring medical care in emergency or emergency forms</p> <p>IPC 1.2 Able to: identify clinical signs of conditions requiring emergency or emergency medical care</p>	Etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; methodology for collecting complaints and anamnesis; physical examination technique (examination, palpation, percussion, auscultation); a list of laboratory and instrumental research methods for assessing the condition, the main medical indications for conducting research and interpreting the results in patients requiring medical care in emergency or emergency forms	Identify clinical signs of conditions requiring emergency or emergency care	Skills for assessing the condition of a patient requiring medical care in emergency or emergency forms
7.	PC-3	Able to provide emergency medical care to patients in case of sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life, to provide emergency medical care to patients in conditions that threaten the patient's life, including clinical death (suspension of vital functions the human body (circulation and/or respiration))	<p>IPC 3.1 Knows: basic cardiopulmonary resuscitation rules; principles of operation of devices for external electropulse therapy (defibrillation); rules for performing external electrical impulse therapy (defibrillation) in case of sudden cessation of blood circulation and / or respiration</p> <p>IPC 3.2 Knows how to: perform measures to provide medical care in urgent and emergency forms; basic cardiopulmonary resuscitation in combination with electrical impulse therapy (defibrillation)</p>	Rules for conducting basic cardiopulmonary resuscitation; principles of operation of devices for external electropulse therapy (defibrillation); rules for performing external electrical impulse therapy (defibrillation) in case of sudden cessation of blood circulation and / or respiration	To carry out measures to provide medical care in urgent and emergency forms; basic cardiopulmonary resuscitation in combination with electrical impulse therapy (defibrillation)	Skills in providing medical care and emergency care in the development of various pathological conditions
8.	PC-5	Able to collect complaints, anamnesis of the patient's life and illness, conduct a complete physical	IPC 5.1 Knows: The legislation of the Russian Federation in the field of health care, regulations and other documents that determine the activities of medical organizations and medical workers; method of collecting	Legislation of the Russian Federation in the field of health care, regulatory legal	Collect complaints, anamnesis of life and disease of the patient and	The skills of collecting complaints, anamnesis of the patient's life and illness,

		<p>examination of the patient (examination, palpation, percussion, auscultation), formulate a preliminary diagnosis and draw up a plan for laboratory and instrumental examinations of the patient</p>	<p>complaints, anamnesis of life and disease of the patient; a technique for a complete physical examination of the patient (examination, palpation, percussion, auscultation); etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs;</p> <p>patterns of functioning of a healthy human body and mechanisms for ensuring health from the standpoint of the theory of functional systems; features of the regulation of the functional systems of the human body in pathological processes; methods of laboratory and instrumental studies for assessing the state of health, medical indications for conducting studies, rules for interpreting their results</p> <p>IPC 5.2 Able to: collect complaints, anamnesis of life and disease of the patient and analyze the information received; conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interpret its results; determine the sequence of volume, content and sequence of diagnostic measures</p>	<p>acts and other documents that determine the activities of medical organizations and medical workers; method of collecting complaints, anamnesis of life and disease of the patient; a technique for a complete physical examination of the patient (examination, palpation, percussion, auscultation); etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs;</p> <p>patterns of functioning of a healthy human body and mechanisms for ensuring health from the standpoint of the theory of functional systems; features of the regulation of the functional systems of the human body in pathological processes; methods of laboratory and instrumental studies for assessing the state of health, medical indications for conducting studies, rules for interpreting their results</p>	<p>analyze the information received; conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interpret its results; determine the sequence of volume, content and sequence of diagnostic measures</p>	<p>conducting a complete physical examination of the patient (examination, palpation, percussion, auscultation), formulating a preliminary diagnosis and drawing up a plan for laboratory and instrumental examinations of the patient</p>
9.	PC-6	<p>Able to refer the patient for laboratory, instrumental examination, for a consultation with specialist doctors if there are medical indications in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care, and also refer the patient for providing specialized medical care in an inpatient setting or in a day hospital if there are medical indications in</p>	<p>IPC 6.1 Knows: general issues of organizing medical care for the population, methods of laboratory and instrumental studies to assess the state of health, medical indications for conducting studies, rules for interpreting their results; procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, standards of medical care</p> <p>IPC 6.2 Knows how to: justify the need and scope of laboratory examination of the patient; justify the need and scope of instrumental examination of the patient; justify the need to refer the patient for consultations with specialist doctors; determine medical indications for the provision of emergency, including emergency specialized, medical care</p>	<p>General issues of organizing medical care for the population, methods of laboratory and instrumental research to assess the state of health, medical indications for conducting research, rules for interpreting their results; procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, standards of medical care</p>	<p>Justify the need and scope of laboratory examination of the patient; justify the need and scope of instrumental examination of the patient; justify the need to refer the patient for consultations with specialist doctors; determine medical indications for the provision of emergency, including emergency specialized, medical care</p>	<p>Skills sufficient to refer the patient to a laboratory, instrumental examination, to a consultation with specialist doctors if there are medical indications in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care, as well as skills sufficient to refer the patient to specialized medical care in an</p>

		accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care				inpatient setting or in a day hospital if there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care, taking into account the standards of medical care
10.	PC-7	Able to make a differential diagnosis with other diseases/conditions, including emergencies, to establish a diagnosis taking into account the current international statistical classification of diseases and related health problems (ICD)	<p>IPC 7.1 Knows: etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; methods of laboratory and instrumental studies for assessing the state of health, medical indications for conducting studies, rules for interpreting their results; ICD</p> <p>IPC 7.2 Able to: analyze the results of the patient's examination, if necessary, justify and plan the scope of additional studies; interpret the results of collecting information about the patient's disease; interpret the data obtained during the laboratory examination of the patient; interpret the data obtained during the instrumental examination of the patient; interpret the data obtained during consultations of the patient by medical specialists; to carry out differential diagnostics of diseases of internal organs from other diseases</p>	Etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; methods of laboratory and instrumental studies for assessing the state of health, medical indications for conducting studies, rules for interpreting their results; ICD	Analyze the results of the patient's examination, if necessary, justify and plan the scope of additional studies; interpret the results of collecting information about the patient's disease; interpret the data obtained during the laboratory examination of the patient; interpret the data obtained during the instrumental examination of the patient; interpret the data obtained during consultations of the patient by medical specialists; to carry out differential diagnostics of diseases of internal organs from other diseases	Skills in differential diagnosis with other diseases/conditions, including emergencies, diagnosis based on the current International Statistical Classification of Diseases and Related Health Problems (ICD)

**4. Sections of the academic discipline and competencies that are formed when mastering them**

№	Competence code	Section name of the discipline	The content of the section in teaching units
1.	UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7	Theoretical foundations of phthisiology. Peculiarities of examination of TB patients. Questions of treatment of patients with tuberculosis.	<p>1. Features of the methodology for examining a patient with pulmonary tuberculosis.</p> <p>2. Examination of patients. Formulation of the diagnosis in accordance with the requirements of the clinical classification.</p> <p>3. Tuberculin diagnostics. BCG vaccination.</p> <p>4. Treatment of patients with tuberculosis.</p> <p>Familiarization of students with the features of collecting various types of anamnesis, objective research methods. Features of laboratory and instrumental methods for examining patients and writing a case history of a tuberculosis patient. Sanitary and epidemiological regime and correction of knowledge about tuberculosis in basic disciplines.</p> <p>Examination of patients. Clinical classification of tuberculosis. The main clinical symptoms of pulmonary tuberculosis.</p> <p>Tuberculin diagnostics. Tuberculin testing for students. Prevention of tuberculosis. BCG and BCG-M vaccination, indications and contraindications. Evaluation of the effectiveness of vaccination, possible complications.</p> <p>Treatment of patients with pulmonary tuberculosis. Anti-tuberculosis drugs. Classification and doses. General principles and methods of tuberculosis chemotherapy. pathogenic therapy. Indications and contraindications for surgical treatment.</p>
2.	UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7	Clinical forms of pulmonary tuberculosis (primary, disseminated, focal tuberculosis).	<p>1. Primary tuberculosis.</p> <p>2. Disseminated tuberculosis.</p> <p>3. Focal pulmonary tuberculosis. detection of tuberculosis.</p> <p>Primary pulmonary tuberculosis. Local and extra-local forms. Features of primary tuberculosis in adults. Diagnosis, clinic, treatment and prevention.</p> <p>disseminated pulmonary tuberculosis. Clinic, laboratory examination, instrumental methods, X-ray picture, diagnosis, treatment and prevention. Clinical analysis of patients with acute, subacute and chronic disseminated pulmonary tuberculosis.</p> <p>Focal pulmonary tuberculosis. Clinic, laboratory and instrumental methods of examination. X-ray picture, early detection and treatment.</p> <p>Clinical analysis of a patient with focal pulmonary tuberculosis.</p> <p>Methods for detecting pulmonary tuberculosis.</p>
3.	UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7	Clinical forms of pulmonary tuberculosis (infiltrative, cavernous, fibrous-cavernous, cirrhotic tuberculosis, pulmonary tuberculosis).	<p>1. Infiltrative pulmonary tuberculosis. Tuberculoma of the lungs. Caseous pneumonia.</p> <p>2. Cavernous and fibrous-cavernous pulmonary tuberculosis. Cirrhotic pulmonary tuberculosis.</p> <p>Infiltrative tuberculosis and pulmonary tuberculosis. Clinical manifestations. Laboratory and instrumental diagnostic methods, X-ray picture. Diagnosis and treatment of patients. Caseous pneumonia. Diagnosis, clinic and treatment. Analysis of patients.</p> <p>Cavernous, fibrous-cavernous and cirrhotic pulmonary tuberculosis. Clinical manifestations. Laboratory and instrumental methods of examination of patients. X-ray picture. Diagnosis, treatment and prevention of cavernous and fibrous-cavernous pulmonary tuberculosis. Clinical analysis of patients with cavernous and fibrous-</p>

			cavernous pulmonary tuberculosis.
4.	UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7	Tuberculous pleurisy. Complications of tuberculosis. TB Dispensary.	1. Tuberculous pleurisy. Complications of tuberculosis. 2. Tuberculosis dispensary. The work of institutions of the general medical network to detect tuberculosis.  Tuberculous pleurisy. Types, clinic, diagnosis and treatment. Complications of tuberculosis: pulmonary bleeding and spontaneous pneumothorax. Urgent care. Structure of anti-tuberculosis service. Organization of work of anti-tuberculosis dispensary. Groupings of registration of tuberculosis patients and methods of monitoring the contingents registered in the TB dispensary. Groups of people at increased risk of tuberculosis. The work of therapists to identify tuberculosis.
5.	UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7	Prevention of tuberculosis. Course exam (all sections of the discipline).	1. Prevention of tuberculosis. 2. Exam.  Types of prevention of tuberculosis. Economic importance of tuberculosis prevention. Clinical expert work. Acceptance of practical skills.  Course exam in all sections of the discipline.

### 5. Volume of the academic discipline and types of academic work

Type of educational work	Labor intensity		Labor intensity (AH) in semesters
	volume in credit units (CU)	volume in academic hours (AH)	
			11 semester (fall)
Classroom work, including			
Lectures (L)	0,5	18	18
Laboratory practicum (LP)*			
Practicals (P)	1,89	68	68
Seminars (S)			
Student's individual work (SIW)	1,61	58	58
Mid-term assessment			
exam	1	36	36
<b>TOTAL LABOR INTENSITY</b>	<b>5</b>	<b>180</b>	<b>180</b>

### 6. Content of the academic discipline

#### 6.1. Sections of the discipline and types of academic work

№	Name of the section of the academic discipline	Types of academic work* (in AH)					total
		L	LP	P	S	SIW	
1.	Theoretical foundations of phthiology. Peculiarities of examination of TB patients. Questions of treatment of patients with tuberculosis.	4		13		12	29
2.	Clinical forms of pulmonary tuberculosis (primary, disseminated, focal tuberculosis).	4		13		12	29
3.	Clinical forms of pulmonary tuberculosis (infiltrative, cavernous, fibrous-cavernous,	4		14		11	29

	cirrhotic tuberculosis, pulmonary tuberculosis).						
4.	Tuberculous pleurisy. Complications of tuberculosis. TB Dispensary.	3		14		11	28
5.	Prevention of tuberculosis. Course exam (all sections of the discipline).	3		14		12	29
	TOTAL	18		68		58	144

\* - L – lectures; LP – laboratory practicum; P – practicals; S – seminars; SIW – student’s individual work.

## 6.2. Thematic schedule of educational work types:

### 6.2.1 Thematic schedule of lectures\*

№	Name of lecture topics	Volume in AH	
1.	Diagnosis of tuberculosis. Tuberculosis classification.	11 semester	2 hours
2.	Tuberculosis treatment. Principles of treatment, features of tuberculosis chemotherapy.	11 semester	2 hours
3.	Tuberculosis treatment. Collapse therapy, surgical treatment.	11 semester	2 hours
4.	Local and non-local forms of primary tuberculosis in children and adults.	11 semester	2 hours
5.	Disseminated pulmonary tuberculosis.	11 semester	2 hours
6.	Infiltrative pulmonary tuberculosis and its role in the development of chronic destructive forms of tuberculosis	11 semester	2 hours
7.	Tuberculoma of the lungs. Clinic, diagnostics, differential diagnostics, treatment.	11 semester	2 hours
8.	Caseous pneumonia. Clinic, diagnostics, differential diagnostics, treatment.	11 semester	2 hours
9.	Cavernous, fibrous-cavernous and cirrhotic pulmonary tuberculosis.	11 semester	2 hours
	TOTAL (total - 18 AH)		
	Brief history of tuberculosis (TB). Epidemiology of tuberculosis. Modern situation in this field. TB Etiology.	11 semester	2 hours
	Pathogenesis and pathomorphology of tuberculosis. Sources and ways transmission of TB infection. TB immunity.	11 semester	2 hours
	Focal pulmonary tuberculosis as typical secondary TB. Early recognition of TB.	11 semester	2 hours
	TB Pleurisy.	11 semester	2 hours
	Pulmonary emergencies.	11 semester	2 hours
	On the question of the possibilities of using additive technologies in medicine.	11 semester	2 hours

\*(full-time form, with the use of EIES and DET)

### 6.2.2. The thematic plan of laboratory practicums (if this type of classes is stipulated in the curriculum)

№	Name of laboratory practicums	Volume in AH

		semester	semester
	TOTAL (total - AH)		

### 6.2.3. Thematic plan of practicals

№	Name of the topics of practicals	Volume in AH	
1.	Features of the method of examination of a patient with pulmonary tuberculosis	11 semester	6 hours
2.	Examination of patients. Formulation of the diagnosis in accordance with the requirements of the clinical classification of tuberculosis.	11 semester	7 hours
3.	Prevention of tuberculosis. Tuberculin diagnostics. BCG vaccination.	11 semester	6 hours
4.	Treatment of patients with pulmonary tuberculosis.	11 semester	7 hours
5.	Primary tuberculosis	11 semester	6 hours
6.	Disseminated tuberculosis	11 semester	6 hours
7.	Focal pulmonary tuberculosis. detection of tuberculosis.	11 semester	6 hours
8.	Infiltrative pulmonary tuberculosis. Tuberculoma of the lungs. Caseous pneumonia.	11 semester	6 hours
9.	Cavernous and fibrous-cavernous pulmonary tuberculosis. Cirrhotic pulmonary tuberculosis.	11 semester	6 hours
10.	Tuberculous pleurisy. Complications of tuberculosis, emergency care.	11 semester	6 hours
11.	TB Dispensary. The work of institutions of the general medical network to detect tuberculosis.	11 semester	6 hours
	TOTAL (total – 68 AH)		

### 6.2.4. Thematic plan of seminars (*if this type of classes is stipulated in the curriculum*)

№	Name of seminar topics	Volume in AH	
		semester	semester
	TOTAL (total - AH)		

### 6.2.5. Types and topics of student's individual work (SIW)

№	Types and topics of SIW	Volume in AH	
1.	Work with normative documents.	11 semester	14,5 hours
2.	Text outline.	11 semester	14,5 hours
3.	Analytical text processing (analysis of the patient's medical history)	11 semester	14,5 hours
4.	Solving situational production (professional) tasks, performing case tasks.	11 semester	14,5 hours
	TOTAL (total – 58 AH)		



### 7. Types of assessment formats for ongoing monitoring and mid-term assessment

№	Semester No.	Types of control	Name of section of academic discipline	Competence codes	Assessment formats		
					types	number of test questions	number of test task options
1.	11	Control of mastering the topic. Monitoring the student's individual work	Theoretical foundations of phthisiology. Peculiarities of curation of TB patients. Questions of treatment of patients with tuberculosis.	UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7	Test questions	10	15
2.	11	Control of mastering the topic. Monitoring the student's individual work	Clinical forms of pulmonary tuberculosis (primary, disseminated, focal tuberculosis).	UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7	Test questions	10	15
3.	11	Control of mastering the topic. Monitoring the student's individual work	Clinical forms of pulmonary tuberculosis (infiltrative, cavernous, fibrous-cavernous, cirrhotic tuberculosis, pulmonary tuberculosis).	UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7	Test questions	30	15
4.	11	Control of mastering the topic. Monitoring the student's individual work	Tuberculous pleurisy. Complications of tuberculosis. TB Dispensary.	UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7	Test questions	10	15
5.	11	Control of mastering the topic. Monitoring the student's individual work	Prevention of tuberculosis. Course exam (all sections of the discipline).	UC-1, UC-6, GPC-1, GPC-5, GPC-7, PC-1, PC-3, PC-5, PC-6, PC-7	Test questions	3	40
					Situational tasks	5	40

### 8. Educational, methodological and informational support for mastering the academic discipline (printed, electronic publications, the Internet and other network resources)

### 8.1. Key literature references

№	Name according to bibliographic requirements	Number of copies	
		at the department	at the department
1	Ftiziatriya: uchebnik / A.V. Pavlunin, A.S. Shprykov, R.F. Mishanov. – N.Novgorod: Izdatel'stvo Nizhegorodskoy gosudarstvennoy meditsinskoj akademii, 2017. – 620 s., il.	20	75
2.	Koshechkin V.A., Phthisiatry: textbook / V.A. Koshechkin. – M.: GEOTAR-Media, 2017. – 256 s.: il.	20	20
3.	Mishin V.Yu., Ftiziatriya: uchebnik / V.Yu. Mishin i dr. – 2-e izd., pererab. i dop. – M.: GEOTAR-Media, 2016. – 520 s.	20	57
4.	Giller D.B., Ftiziatriya: uchebnik / D.B. Giller, V.Yu. Mishin i dr. – M.: GEOTAR-Media, 2020. – 576 s.	5	10

### 8.2. Further reading

№	Name according to bibliographic requirements	Number of copies	
		at the department	in the library
1.	Pokrovskiy V.V., VICH-infektsiya i SPID / pod red. Pokrovskogo V.V. - M.: GEOTAR-Media, 2020. - 696 s.	20	20
2.	Chuchalin A.G., Pul'monologiya / pod red. Chuchalina A.G. - M.: GEOTAR-Media, 2020. - 768 s.	20	20
3.	Avdeev S.N., Legochnaya gipertenziya / pod red. Avdeeva S.N. - M.: GEOTAR-Media, 2019. - 608 s.	20	20
4.	Struchkov P.V., Spirometriya / Struchkov P.V., Drozdov D.V., Lukina O.F. - M.: GEOTAR-Media, 2019. - 112 s.	20	20
5.	Bol'shakov, O.P. Operativnaya khirurgiya i topograficheskaya anatomiya: Uchebnik / O.P. Bol'shakov. - SPb.: Piter, 2018. - 432 c.	20	20
6.	Markina N.Yu., Ul'trazvukovaya diagnostika / Markina N.Yu., Kislyakova M.V. - M.: GEOTAR-Media, 2018. - 240 s.	20	20
7.	Chuchalin A.G., Respiratornaya meditsina: v 3 t. T. 1.: rukovodstvo / pod red. A.G. Chuchalina – M.: GEOTAR-Media, 2017. – 640 s.	20	20
8.	Chuchalin A.G., Respiratornaya meditsina: v 3 t. T. 2.: rukovodstvo / pod red. A.G. Chuchalina – M.: GEOTAR-Media, 2017. – 544 s.	20	20
9.	Chuchalin A.G., Respiratornaya meditsina: v 3 t. T. 3.: rukovodstvo / pod red. A.G. Chuchalina – M.: GEOTAR-Media, 2017. – 464 s.	20	20
10.	Il'kovich M.M., Interstitsial'nye i orfannye zabolovaniya legkikh / pod red. M. M. Il'kovicha. - M.: GEOTAR-Media, 2016. - 560 s. : il.	20	20
11.	Yablonskiy P.K., Ftiziatriya. Natsional'nye klinicheskie rekomendatsii / pod red. P.K.	20	20

	Yablonskogo - M.: GEOTAR-Media, 2015. - 240 s.		
12.	Safonov, D. V. Ul'trazvukovaya diagnostika opukholey legkikh / D. V. Safonov, B. E. Shakhov. – M.: VIDAR-M, 2014. – 144 s. : il.	20	20
13.	Mishin V.Yu., Tuberkulinodiagnostika / Mishin V.Yu. – M.: GEOTAR-Media, 2013. – 136 s.	20	20
14.	Natsional'nye klinicheskie rekomendatsii po primeneniyu khirurgicheskikh metodov v lechenii tuberkuleza legkikh. – SPb.: Natsional'naya assotsiatsiya ftiziatrov; Assotsiatsiya torakal'nykh khirurgov Rossii. – 2013. – 22 s.	20	20
15.	Natsional'nye klinicheskie rekomendatsii po lecheniyu spontannogo pnevmotoraksa. – M.: Rossiyskoe obshchestvo khirurgov, 2013. – 22 s.	20	20
16.	Davies P.D.O. Clinical tuberculosis / P.D.O Davies [et al.]. – 5-th ed. – CRC Press, 2015. – 477 p.	5	-
17.	Shaaf H.S. Tuberculosis: A comprehensive clinical reference / H.S. Schaaf [et al.]. – Saunders, 2009. – 1046 p.	5	-

### 8.3. Electronic educational resources for teaching academic subjects

#### 8.3.1. Internal Electronic Library System of the University (IELSU)

№	Name of the electronic resource	Brief description (content)	Access conditions	Number of users
1.	<b>Internal Electronic Library System of the University (IELSU)</b> <a href="http://nbk.pimunn.net/MegaPro/Web">http://nbk.pimunn.net/MegaPro/Web</a>	Proceedings of the faculty of the university: textbooks, teaching aids, collections of problems, methodological manuals, laboratory work, monographs, collections of scientific papers, scientific articles, dissertations, abstracts of dissertations, patents	From any computer and mobile device with an individual login and password. Access mode: <a href="http://nbk.pimunn.net/MegaPro/Web">http://nbk.pimunn.net/MegaPro/Web</a>	Not limited

#### 8.3.2. Electronic educational resources acquired by the University

№	Name of the electronic resource	Brief description (content)	Access conditions	Number of users
1.	<b>EBS «Konsul'tant studenta» (Elektronnaya baza dannykh «Konsul'tant studenta». Baza dannykh «Meditsina. Zdravookhranenie (VO) i «Meditsina. Zdravookhranenie (SPO)»)</b> <a href="http://www.studmedlib.ru">http://www.studmedlib.ru</a>	Educational literature, additional materials (audio, video, interactive materials, test tasks) for higher medical and pharmaceutical education	From any computer and mobile device with an individual login and password. Access mode: <a href="http://nbk.pimunn.net/MegaPro/Web">http://nbk.pimunn.net/MegaPro/Web</a>	Not limited  Validity: until 31.12.2022
2.	<b>Baza dannykh «Konsul'tant vracha.</b>	National clinical guidelines, guidelines,	From any computer and	Not limited

	<b>Elektronnaya meditsinskaya biblioteka»</b> <a href="https://www.rosmedlib.ru">https://www.rosmedlib.ru</a>	textbooks, monographs, atlases, pharmaceutical guides, audio and video materials, ICD-10 and ATC	mobile device with an individual login and password. Access mode: <a href="http://nbk.pimunn.net/MegaPro/Web">http://nbk.pimunn.net/MegaPro/Web</a>	Validity: until 31.12.2022
3.	<b>Elektronnaya bibliotechnaya sistema «Bukap»</b> <a href="https://www.books-up.ru">https://www.books-up.ru</a>	Educational and scientific medical literature of Russian publishing houses, incl. translations of foreign publications. Within the framework of the Big Medical Library project, publications of universities participating in the project are available	From any computer and mobile device using an individual login and password; access from university computers is automatic. Publications from the "My Books" section are available for reading. Access mode: <a href="http://nbk.pimunn.net/MegaPro/Web">http://nbk.pimunn.net/MegaPro/Web</a>	Not limited Validity: until 31.05.2022
4.	<b>Obrazovatel'naya platforma «YuRAYT»</b> <a href="https://urait.ru">https://urait.ru</a>	Collection of publications on psychology, ethics, conflictology	From any computer and mobile device with an individual login and password. Access mode: <a href="http://nbk.pimunn.net/MegaPro/Web">http://nbk.pimunn.net/MegaPro/Web</a>	Not limited Validity: until 31.12.2022
5.	<b>Elektronnye periodicheskie izdaniya v sostave bazy dannykh «Nauchnaya elektronnaya biblioteka eLIBRARY</b> <a href="https://elibrary.ru">https://elibrary.ru</a>	Electronic medical magazines	From university computers. Access mode: <a href="https://elibrary.ru">https://elibrary.ru</a>	Not limited Validity: until 31.12.2022
6.	<b>Integrirrovannaya informatsionno-bibliotechnaya sistema (IBS) nauchno-obrazovatel'nogo meditsinskogo klastera Privolzhskogo federal'nogo okruga – «Srednevolzhskiy» (dogovor na besplatnoy osnove)</b>	Electronic copies of scientific and educational publications from the funds of the libraries participating in the scientific and educational medical cluster of the Volga Federal District "Srednevolzhskiy"	Access by individual login and password from any computer and mobile device. Access mode: sites of libraries participating in the project	Not limited Validity: not limited
7.	<b>Elektronnaya spravочно-pravovaya</b>	Regulatory documents regulating the activities of	From the computers of the	Not limited

	<b>sistema «Konsul'tant Plyus» (dogovor na besplatnoy osnove)</b> http://www.consultant.ru	medical and pharmaceutical institutions	scientific library. Access mode: http://www.consultant.ru/	Validity: not limited
8.	<b>Natsional'naya elektronnyaya biblioteka (NEB) (dogovor na besplatnoy osnove)</b> http://nэб.рф	Electronic copies of publications (including scientific and educational) on a wide range of knowledge	Scientific and educational works that have not been republished for the last 10 years are in the public domain. Works limited by copyright – from the computers of the scientific library. Access mode: http://nэб.рф	Not limited  Validity: not limited

### 8.3.3 Open access resources

<i>№</i>	<i>Name of the electronic resource</i>	<i>Brief description (content)</i>	<i>Access conditions</i>
<b>Domestic resources</b>			
1.	<b>Federal'naya elektronnyaya meditsinskaya biblioteka (FEMB)</b> http://nэб.рф	Full-text electronic copies of printed publications and original electronic publications in medicine and biology	From any computer on the Internet. Access mode: http://nэб.рф
2.	<b>Nauchnaya elektronnyaya biblioteka eLIBRARY.RU</b> https://elibrary.ru	Abstracts and full texts of scientific publications, electronic versions of Russian scientific journals	From any computer on the Internet. Access mode: https://elibrary.ru
3.	<b>Nauchnaya elektronnyaya biblioteka otkrytogo dostupa KiberLeninka</b> http://cyberleninka.ru	Full texts of scientific articles with annotations published in scientific journals in Russia and neighboring countries	From any computer on the Internet. Access mode: https://cyberleninka.ru
<b>Foreign resources within the framework of the National subscription</b>			
1.	<b>Elektronnyaya kolleksiya izdatel'stva Springer</b> https://rd.springer.com	Full-text scientific publications (journals, books, articles, scientific protocols, conference proceedings)	From university computers. Access mode: https://rd.springer.com
2.	<b>Baza dannykh periodicheskikh izdaniy izdatel'stva Wiley</b> www.onlinelibrary.wiley.com	Wiley Periodicals	From university computers, from any computer using an individual login and password Access mode: www.onlinelibrary.wiley.com
3.	<b>Elektronnyaya kolleksiya periodicheskikh izdaniy «Freedom» na platforme Science Direct</b> https://www.sciencedirect.com	Elsevier Periodicals	From university computers, from any computer with an individual login and password. Access mode: https://www.sciencedirect.com

	t.com		
4.	<b>Baza dannykh Scopus</b> www.scopus.com	International Science Citation Abstract Database	From university computers, from any computer with an individual login and password. Access mode: www.scopus.com
5.	<b>Baza dannykh Web of Science Core Collection</b> https://www.webofscience.com	International Science Citation Abstract Database	From university computers, from any computer with an individual login and password. Access mode: https://www.webofscience.com
6.	<b>Baza dannykh Questel Orbit</b> https://www.orbit.com	Questel Patent Database	From university computers. Access mode: https://www.orbit.com
<b>Foreign resources of open access (the main ones are indicated)</b>			
1.	<b>PubMed</b> <a href="https://www.ncbi.nlm.nih.gov/pubmed">https://www.ncbi.nlm.nih.gov/pubmed</a>	Search engine of the US National Library of Medicine on the databases "Medline", "PreMedline"	From any computer and mobile device. Access mode: https://www.ncbi.nlm.nih.gov/pubmed
2.	<b>Directory of Open Access Journals</b> <a href="http://www.doaj.org">http://www.doaj.org</a>	Directory of open access to the full-text collection of periodicals	From any computer and mobile device. Access mode: http://www.doaj.org
3.	<b>Directory of open access books (DOAB)</b> <a href="http://www.doabooks.org">http://www.doabooks.org</a>	Directory of open access to the full-text collection of scientific books	From any computer and mobile device. Access mode: http://www.doabooks.org

## 9. Material and technical support for mastering an academic discipline

### 9.1. List of premises for classroom activities for the discipline

For conducting classes, the clinical base of the department is used. The department is located on the basis of the Nizhny Novgorod Regional Clinical Tuberculosis Dispensary. The bed capacity of the Nizhny Novgorod Regional Clinical TB Dispensary (including branches) is represented by 390 round-the-clock beds, 10 day care beds, 30 beds in a home hospital (order of the Ministry of Health of the Nizhny Novgorod Region No. 315-682/19П/од from 09.12.2019). The dispensary department accepts adults and children.

In the structure of the head office:

- Children's department - 30 beds,
- Therapeutic department - 40 beds,
- Diagnostic department - 30 beds of round-the-clock stay and 10 day hospital,
- Extrapulmonary department - 40 beds,
- Pulmonary surgery department - 40 beds,

The clinical base meets the requirements for clinics and allows for a full-fledged educational process.

#### List of premises

№	Room number	Footage	Location
1	Room 45 (classroom №2)	11,3	1 floor
2	Room 116 (classroom №1)	15,6	1 floor
3	Room 117 (classroom №3)	16,2	1 floor
4	Room 92 (lecture hall)	57,7	2 floor
5	Room 74 (classroom №6)	14,5	4 floor
6	Room 72 (classroom №7)	19,5	4 floor

7	Room 75 (classroom №4)	11,2	4 floor
8	Room 61 (classroom №8)	16,0	4 floor
9	Room 56 (classroom №5)	20,4	4 floor
10	Room 73 (equipment storage room)	9,6	4 floor

1) A doctor's office for providing medical care to phthisiatric patients in a consultative polyclinic of an anti-tuberculosis dispensary.

2) Therapeutic department of pulmonary tuberculosis of the TB dispensary.

3) Therapeutic department of pulmonary tuberculosis (diagnostic) of the TB dispensary.

4) Tuberculosis pulmonary surgical department of the tuberculosis dispensary.

5) Children's department of the TB dispensary.

6) Department of extrapulmonary tuberculosis of the TB dispensary.

7) Urological department of the TB dispensary - Avtozavodsky branch.

8) Dressing room.

9) A functional diagnostics room equipped with an electrocardiograph and a spiograph.

10) Ultrasound diagnostic room equipped with an ultrasonic scanner.

11) Operating unit equipped with a video thoracoscopic stand.

12) X-ray rooms equipped with a digital fluorograph; devices for radiography, fluoroscopy and linear tomography; multislice computed tomography.

13) Bacteriological laboratory equipped with BACTEC automatic bacterial analyzer, equipment for molecular genetic research.

14) Endoscopy room equipped with fibrobronchoscopes, rigid bronchoscopes, fibrosophagoduodenoscope.

## 9.2. List of equipment for classroom activities for the discipline

The classrooms are equipped with sets of tables published in a typographical way by the Department of Tuberculosis of the Moscow Medical Academy named after I.M. Sechenov; tables and stands "Treatment of tuberculosis", created by teachers of the department; advanced negatoscopes and sets of training radiographs. There is an "Overhead-CAVA" projector and multimedia projectors for slide demonstrations.

The main dispensary equipment used in the educational process:

- controlled X-ray diagnostic complex OKO-KRT NIPC "Electron" (RF).

- fluorographic apparatus 12F7u with a camera 110x110 (RF).

- digital device AFU-OKO NIPC "Electron" (RF).

- Siemens Somatom emotion 16 spiral computed tomograph (Germany).

- express analyzer "Exan-G" (RF).

- hemoglobinometer Microlab - 540 (RF).

- refractometer URF-22 (RF).

- electrocardiograph "Cardimax X-326U" (Japan).

- Spirasift 3000 spirometer (Japan).

- fiber bronchoscope "BF Olympus-40", "Olympus-TE", "BF Pentax-15v" (Japan).

- fibrogastroscope "Olympus GIF 20" (Japan).

- luminescent microscope MIKMED-2 (RF).

- automated microbiological system for the detection of mycobacteria "BD Bactec MGIT TB-960 system" (Great Britain).

- test system for the determination of multidrug resistance of Mycobacterium tuberculosis "TV-BIOCHIP (MDR)" (RF).

## 9.3. A set of licensed and freely distributed software, including domestic production

Ite	Software	number of	Type of software	Manufacturer	Number in the unified	Contract No. and date
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<b>m no.</b>		<b>licenses</b>			<b>register of Russian software</b>	
1	Wtware	100	Thin Client Operating System	Kovalev Andrey Alexandrovich	1960	2471/05-18 from 28.05.2018
2	MyOffice is Standard. A corporate user license for educational organizations, with no expiration date, with the right to receive updates for 1 year.	220	Office Application	LLC "NEW CLOUD TECHNOLOGIES"	283	without limitation, with the right to receive updates for 1 year.
3	LibreOffice		Office Application	The Document Foundation	Freely distributed software	
4	Windows 10 Education	700	Operating systems	Microsoft	Azure Dev Tools for Teaching Subscription	
5	Yandex. Browser		Browser	«Yandex»	3722	
6	Subscription to MS Office Pro for 170 PCs for FGBOU VO "PIMU" of the Ministry of Health of Russia	170	Office Application	Microsoft		23618/HN10030 LLC "Softline Trade" from 04.12.2020



## 10. List of changes to the working program (to be filled out by the template)

Federal State Budgetary Educational Institution of Higher Education  
"Privolzhsky Research Medical University"  
Ministry of Health of the Russian Federation  
(FSBEI HE "PRMU" of the Ministry of Health of Russia)

Department of  
*PHTHIOLOGY NAMED AFTER I.S. NIKOLAEV*

### CHANGE REGISTRATION SHEET

working program for the academic discipline  
*PHTHISIATRY*

Field of study / specialty / scientific specialty: 31.05.01 GENERAL MEDICINE

Training profile: GENERAL PRACTITIONER

Mode of study: full-time

Position	Number and name of the program section	Contents of the changes made	Effective date of the changes	Contributor's signature
1	<i>Number 2, 2.1 Position of the academic discipline...; Number 8.3. Electronic educational resources for teaching academic subjects.</i>	<i>1) Making changes, according to the adjusted curriculum (changing the index of the academic discipline). 2) Updating the list of electronic educational resources in the thematic section of the GEP.</i>	<i>17.09.2021</i>	

Approved at the department meeting  
Protocol No. 4 of 17/09/2022

Head of the department of phthiology  
named after I.S. Nikolaev, Holder of an  
Advanced Doctorate (Doctor of Science) in  
Medical Sciences, full professor

\_\_\_\_\_/Shprykov A.S.  
(signature)

Position	Number and name of the program section	Contents of the changes made	Effective date of the changes	Contributor's signature
1	<i>Number 6.2.1 Thematic schedule of lectures</i>	<i>1) Modernization of the work program in the framework of the recommendations received at the meeting of the Directorate of the PRMU Development Program "Priority 2030" - a lecture was added on the use of additive technologies in phthisiology and other branches of medicine in English (SDO portal).</i>	06.09.2022	

Approved at the department meeting  
Protocol No. 2 of 06/09/2022

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