MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational Institution
«BELARUSIAN STATE MEDICAL UNIVERSITY»

Контрольный экземпляр

APPROVED
by Rector of the Educational Institution «Belarusian State Medical University»
_____ S.P.Rubnikovich
25.06.2026
Reg. # UD-0911-01-70/2627/edu.

PHTHISIOPULMONOLOGY

Curriculum of the educational institution in the academic discipline for the specialty

7-07-0911-01 «General Medicine»

2026

Curriculum is based on the educational program «Phthisiopulmonology», approved 25.06.2026 registration # УД-0911-01-70/2627/уч., on the educational plan in the specialty 7-07-0911-01 «General Medicine», approved 15.04.2026, registration # № 7-07-0911-01/2627/mf

COMPILERS:

E.A.Lapteva, Head of the Department of Pulmonology, Phthisiatry, Allergology and Occupational Pathology with a course for advanced training and retraining of the Educational Institution «Belarusian State Medical University», D.Sc., Professor;

Zh.I.Krivosheeva, Associate Professor of the Department of Pulmonology, Phthisiatry, Allergology and Occupational Pathology with a course for advanced training and retraining of the Educational Institution «Belarusian State Medical University», PhD, Associate Professor;

N.A.Emelyanova, Senior Lecturer of the Department of Pulmonology, Phthisiatry, Allergology and Occupational Pathology with a course for advanced training and retraining of the Educational Institution «Belarusian State Medical University»;

T.O.Smolenskaya, Senior Lecturer of the Department of Pulmonology, Phthisiatry, Allergology and Occupational Pathology with a course for advanced training and retraining of the Educational Institution «Belarusian State Medical University»

RECOMMENDED FOR APPROVAL:

by the Department of Pulmonology, Phthisiatry, Allergology and Occupational Pathology with a course for advanced training and retraining of the Educational Institution «Belarusian State Medical University»
(protocol # 26a of 14.05.2026);

by the Scientific and Methodological Council of the Educational Institution «Belarusian State Medical University»
(protocol # 10 of 25.06.2026)

EXPLANATORY NOTE

«Phthisiopulmonology» is an academic discipline of the module «Therapeutic Module 2», containing systematized scientific knowledge on the clinical manifestations, treatment and prevention of tuberculosis, organization and conduct of sanitary and anti-epidemic measures, methods of diagnosis and differential diagnosis of tuberculosis with non-tuberculosis diseases of the respiratory system.

The aim of the educational discipline «Phthisiopulmonology» is the formation of specialized competence for the diagnosis, treatment of tuberculosis and similar diseases, the organization of preventive sanitary and anti-epidemic measures in tuberculosis.

The objectives of the educational discipline «Phthisiopulmonology» consist in formation of students' scientific knowledge about etiology, pathogenesis, morphological features of pathological processes in tuberculosis, general principles of diagnosis, treatment and prevention of tuberculosis, skills necessary for:

screening of patients with tuberculosis;

interpretation of the results of laboratory and instrumental methods of research in tuberculosis of the respiratory organs and some extrapulmonary forms;

diagnosis and treatment prescription;

epidemiological and hygienic measures for investigating cases of tuberculosis, in order to ensure the health and epidemics of the population;

providing emergency medical care for pulmonary bleeding and other conditions threatening human life and health.

The knowledge, skills and abilities acquired during the study of the academic discipline «Phthisiopulmonology» are necessary for successful mastering of the following academic disciplines: «Infectious Diseases», «Internal Diseases» and module «Surgical Module 3».

The student, who has mastered the content of the educational material of the discipline, should have the following specialized competence: use knowledge of clinical symptoms, apply methods of patient examination, diagnosis and differential diagnosis, principles of treatment and prevention, make clinical diagnosis of tuberculosis.

As a result of studying the academic discipline «Phthisiopulmonology», the student should

know:

history of tuberculosis and tuberculosis control;

modern strategies to combat tuberculosis;

etiology and pathogenesis of tuberculosis;

classification, clinical profile and diagnosis of tuberculosis;

clinical manifestations of major emergency conditions in tuberculosis and the principles of their treatment;

features of the course of tuberculosis in combination with other diseases;

organization and implementation of early detection of tuberculosis;

treatment of patients with tuberculosis;

the basics of medical examination and rehabilitation of patients with tuberculosis, the principles of prevention and medical and social examination;

principles of organization of vaccine prevention of tuberculosis;

procedures for organizing anti-tuberculosis measures among the urban and rural population, depending on the epidemic situation;

forms of hygiene education and education of patients in the prevention of tuberculosis;

the principles of infectious control in health organizations;

rules of medical ethics and deontology in the work with patients with tuberculosis;

be able to:

conduct an examination and objective examination of a patient with tuberculosis;

draw up an examination plan for a tuberculosis patient;

interpret the results of laboratory and instrumental research methods;

formulate and substantiate the clinical diagnosis of tuberculosis;

determine the indications and contraindications to the conduct of immunological tests (intradermal Mantoux test and diaskintest) and take into account their results;

make a treatment plan,

determine the type and degree of epidemic risk of the source of tuberculosis infection;

draw up a plan of measures to improve the various centers of tuberculosis infection;

draw up a plan for the hygiene and education of patients;

process the necessary medical documentation;

master:

methods of clinical and laboratory examination of patients with tuberculosis;

methods of carrying out specific vaccine prophylaxis;

methods of recording the results of skin tests for tuberculosis (Mantoux test, diaskintest);

modern methods of infection control;

methods of treatment of tuberculosis;

skills for health education.

Total number of hours for the study of the academic discipline is 222 academic hours, of which 116 classroom hours and 106 hours of student independent work. Classroom hours according to the types of studies: lectures – 27 hours (including 6 hours of supervised student independent work (SSIW)), practical classes – 95 hours.

Form of higher education – full-time.

Intermediate certification is carried out in accordance with the curriculum of the specialty in the form of differentiated credit (8 semesters), credit (11th semester).

ALLOCATION OF ACADEMIC TIME ACCORDING TO SEMESTERS OF STUDY

Code, name specialties	semester	Number of academic hours						Form of intermediate assessment
		total	in-class	including			out-of-class self-studies	
				lectures	supervised student independent work	practical classes		
1-79 01 01 «General Medicine»	7	72	45	9	3	36	27	
	8	60	33	9	3	24	27	differentiated credit
	11	90	38	3	-	35	52	credit
Total hours		**222**	**116**	**21**	**6**	**95**	**106**	

THEMATIC PLAN

Section (topic) name	Number of class hours	
	lectures (incl. SSIW)	practical
1. History and general pathology of tuberculosis	**6**	**2**
1.1. History of the study of tuberculosis, epidemiology and etiology of tuberculosis	4,5	2
1.2. Pathogenesis and pathological anatomy of tuberculosis. Immunology of tuberculosis	1,5	-
2. Diagnosis and screening of tuberculosis patients	**1,5**	**4**
3. Classification and clinical forms of tuberculosis	**13,5**	**65**
3.1. Clinical classification of tuberculosis. Clinical forms of primary tuberculosis	1,5	6
3.2. Clinical forms of secondary tuberculosis: focal, infiltrative pulmonary tuberculosis, caseous pneumonia, pulmonary tuberculoma, disseminated pulmonary tuberculosis	4,5	12
3.3. Cavernous, fibro-cavernous, cirrhotic pulmonary tuberculosis. Complications of pulmonary tuberculosis	1,5	6
3.4. Tuberculosis of extrapulmonary localization. Tuberculosis of the central nervous system. Tuberculous pleurisy	1,5	3

Section (topic) name	Number of class hours	
	lectures (incl. SSIW)	practical
3.5. Pulmonary tuberculosis in combination with other diseases and conditions	1,5	4
3.6. Differential diagnosis of tuberculosis with respiratory diseases of other etiology	1,5	27
3.7. Sarcoidosis of the respiratory system	1,5	4
3.8. Mycobacteriosis of the lungs	-	3
4. Treatment of patients with tuberculosis of the respiratory system	**3**	**6**
5. Prevention of tuberculosis	**1,5**	**12**
6. Organization of tuberculosis care for the population. Modern international strategies to combat tuberculosis	**1,5**	**6**
Total hours	**27**	**95**

CONTENT OF THE ACADEMIC DISCIPLINE

1. History and general pathology of tuberculosis

1.1. History of the study of tuberculosis, epidemiology and etiology of tuberculosis

The main stages of the development of the study of tuberculosis. Discoveries in the diagnosis, treatment and prevention of tuberculosis. Contribution of scientists to the theory and practice of tuberculosis control. History of formation of tuberculosis service in the Republic of Belarus.

Features of the epidemic process in tuberculosis and the factors that determine its development. Ways of the spread of tuberculosis infection. The role of socio-economic factors in the development of tuberculosis. Tuberculosis in countries with different economic levels. Social and medical groups at high risk of developing tuberculosis. Tuberculosis in prisons. Infection by mycobacteria, morbidity, sickness and mortality from tuberculosis, importance of epidemiological indicators in determining the epidemic situation of tuberculosis in various age groups, among residents of the city and in rural areas. Statistics and monitoring of tuberculosis in the Republic of Belarus. Republican register «Tuberculosis».

Taxonomy and classification of mycobacterium. Cause of tuberculosis: structure, main properties. Mycobacterium of tuberculosis complex. Rapidly and slowly multiplying mycobacteria, persistent forms, L-forms of mycobacterium, vaccine strain of Calmette and Geren (BCG). Drug resistance, types and genetic bases of drug resistance formation.

Pathogenesis and virulence of mycobacterium tuberculosis (MBT). Aerobiology of MBT transmission. The degree of contagiousness of the patient with different clinical forms of tuberculosis. Methods of taking biological material for study. Methods of

detection of MBT in sputum and other biological material, the significance of their results for diagnosing tuberculosis and determining the phase of the tuberculosis process. Accelerated and fast methods of diagnosis of tuberculosis with multidrug resistance of the causative agent (MDR-TB). MGIT-BACTEC-960. Methods of identification of mycobacterium, determination of sensitivity to anti-tuberculosis drugs. Modern molecular genetic methods for detecting MBT and determining their sensitivity to anti-tuberculosis drugs: INNO-LIPA test system (LPA, Hain-test), Xpert MTB/RIF, XMTB/RIF Ultra, XpertMTB/XDR on the platform Gene Xpert.

Non-tuberculosis «atypical» mycobacteria and their importance in the development of pulmonary pathology. Epidemiological and clinical significance of different types and forms of mycobacteria.

1.2. Pathogenesis and pathological anatomy of tuberculosis. Immunology of tuberculosis

Ways of penetration and spread of mycobacterium of tuberculosis in the human body. Stages of pathogenesis of primary tuberculosis. Latent tuberculosis infection. Mycobacterium infection and tuberculosis disease. Structure of Mycobacterium infection and tuberculosis disease granuloma. Morphology of the main clinical forms of tuberculosis. Residual post-tuberculosis changes and their role in the development of tuberculosis. Pathomorphology of tuberculosis: species, especially in modern conditions.

Immunology and immunopathology in tuberculosis. Anti-tuberculosis immunity, species. Mechanism of formation of anti-tuberculosis immunity during vaccination and infection with mycobacterium tuberculosis. The importance of immunodeficiency in the development and course of tuberculosis infection. Allergy to tuberculosis and its types: post-vaccinative (in children vaccinated with BCG) and infectious (in mycobacterium infected tuberculosis). The definition of anergy.

2. Diagnosis and screening of tuberculosis patients

Diagnostics of tuberculosis of the respiratory organs in healthcare organizations. Algorithm of tuberculosis diagnosis. Mandatory methods of examination (mandatory diagnostic minimum) of a patient suspected of tuberculosis.

Systematic screening for active tuberculosis in target populations.

Collection of anamneses, physical methods of research, their clinical and differential diagnostic value; examination of patients at suspicion of extrapulmonary localization of tuberculosis.

Radial methods of examination, readings for assignment. Radiological syndromes of tuberculosis and other respiratory diseases, linear and computed tomography. Modern digital technology, special radiation research methods for tuberculosis and other lung diseases, indications for use. Radiation diagnostics for extrapulmonary tuberculosis.

Microbiological diagnosis of tuberculosis: methods, types of diagnostic material.

Immunodiagnostics of tuberculosis infection. Tuberculin sample Mantoux with 2 tuberculin units (TU). Differential diagnosis of infectious and post-vaccine allergies to tuberculin. Modern immunodiagnostic methods: skin test with TB allergen recombinant (diaskintest), tests for the release of gamma interferon (Quantiferon-TB and T-SPOT-

TB), their importance in the diagnosis of local forms of tuberculosis and latent tuberculosis.

Endoscopic research methods. Bronchoscopy: types, indications for conducting.

Functional tests of lung ventilation gas exchange, value in the diagnosis of lung diseases.

Surgical research methods and diagnostic operations.

Cytological examination of pleural exudate, bronchoalveolar fluids, punctates of lymph nodes, pleura and lung. Histological examination of lung and other organ tissues in tuberculosis and non-tubercular lung diseases.

3. Classification and clinical forms of tuberculosis

3.1. Clinical classification of tuberculosis. Clinical forms of primary tuberculosis

Principles of classification of tuberculosis. Sections of the classification reflecting the main clinical forms, characterization of the tuberculosis process and its complications, residual changes after cured tuberculosis. Formulation of the diagnosis of tuberculosis. The concept of active, inactive (clinically cured) tuberculosis, primary and secondary tuberculosis. International Classification of Diseases (ICD-10). Pathogenesis and pathological anatomy of primary tuberculosis. Factors and groups at risk of developing primary forms of tuberculosis. Primary infection. Latent tuberculosis infection. The significance of skin tests (tuberculin test, diaskintest) in the diagnosis of primary tuberculosis.

Clinical forms of primary tuberculosis. Intrathoracic lymph node tuberculosis: pathogenesis, pathomorphology, clinical-radiological forms, clinical flow, diagnostic features, complications, treatment, outcomes, differential diagnosis with similar diseases.

Primary tuberculosis complex: pathogenesis and pathomorphology, clinical pattern, diagnosis, treatment, complications, differential diagnosis. The outcomes of the primary complex and the significance of residual changes in the pathogenesis of secondary forms of tuberculosis.

3.2. Clinical forms of secondary tuberculosis: focal, infiltrative pulmonary tuberculosis, caseous pneumonia, pulmonary tuberculoma, disseminated pulmonary tuberculosis

The concept of secondary forms of tuberculosis. Focal pulmonary tuberculosis: detection, frequency of occurrence, pathogenesis and pathomorphology of fresh and chronic focal pulmonary tuberculosis, diagnosis, clinical pattern, differential diagnosis, treatment, medical and social examination, outcomes.

Lung Infiltration Tuberculosis: Detection, frequency of occurrence, pathogenesis and pathomorphology. Clinical x-ray syndroms of infiltrating tuberculosis, features of their course and diagnosis, prognosis, differential diagnosis, treatment, medical and social examination, outcomes.

Caseous pneumonia: detection, frequency of occurrence, pathogenesis and pathomorphology, clinical picture of the disease. Clinical x-ray forms of caseous

pneumonia, diagnosis, differential diagnosis, treatment, complications, medical and social examination, prognosis, outcomes.

Pulmonary tuberculoma: definition, frequency of occurrence, pathogenesis, pathomorphology and tuberculoma species. Clinical flow, diagnosis, differential diagnosis of pulmonary tuberculoma, treatment, medical-social examination, prognosis, outcomes.

Disseminated tuberculosis: definition, classification. Miliar tuberculosis: definition, frequency of occurrence, pathogenesis and pathomorphology of miliary tuberculosis. Diagnosis, clinical forms of miliary tuberculosis and their course, complications, treatment, outcomes, differential diagnosis, prognosis, medical and social expertise.

Suspected and chronic disseminated pulmonary tuberculosis.

Examination of patients with respiratory tuberculosis, collection of complaints and disease history; physical examination; preparation of an examination plan; interpretation of instrumental and laboratory examination results; diagnosis; justification of a treatment plan. Preparation of an inpatient medical record.

3.3. Cavernous, fibro-cavernous, cirrhotic pulmonary tuberculosis. Complications of pulmonary tuberculosis

Cavernous pulmonary tuberculosis: detection, frequency of occurrence, pathogenesis and morphological structure. Clinical, X-ray and laboratory signs of caverns, types of healing caverns. Diagnosis, differential diagnosis of cavernous pulmonary tuberculosis, treatment, medical and social expertise, prognosis, outcomes.

Fibrosis-cavernous pulmonary tuberculosis: detection, frequency of occurrence, causes of formation. Pathogenesis and pathological anatomy of pulmonary fibrosis cavernous tuberculosis, variants of the clinical current, diagnosis, differential diagnosis, treatment, assessment of the epidemiological danger of the patient, prognosis, outcomes.

Cirrhotic pulmonary tuberculosis: detection, frequency of occurrence. Pathogenesis and pathomorphology of cirrhotic pulmonary tuberculosis, clinical flow, diagnosis, differential diagnosis, treatment, prognosis, outcomes.

Complications of chronic tuberculosis (internal amyloidosis, chronic pulmonary heart).

Pulmonary bleeding, spontaneous pneumothorax, acute respiratory distress syndrome: pathogenesis, pathological anatomy, classification, clinical pattern, diagnosis, differential diagnosis, emergency medical care, outcomes, prognosis.

3.4. Tuberculosis of extrapulmonary localization. Tuberculosis of the central nervous system. Tuberculosis pleurisy

Tuberculosis of the central nervous system. Tuberculosis meningitis: pathogenesis and pathological anatomy, clinical forms, diagnosis, differential diagnosis, treatment, medical and social examination, prognosis, outcomes. Lab readings of cerebrospinal fluid.

Peripheral and mesenteric lymph node tuberculosis: pathogenesis and pathological anatomy, clinical forms, diagnosis, differential diagnosis, treatment, prognosis, outcomes of the disease.

Tuberculosis pleurisy: pathogenesis, pathological anatomy, classification, clinical pattern, diagnosis, treatment principles, prognosis, possible outcomes. Laboratory examination of exudate and transudate.

Clinical picture of tuberculosis pleura, diagnosis, differential diagnosis, treatment, prognosis and outcome of the disease. Upper respiratory and bronchial tuberculosis: detection, frequency of occurrence, pathogenesis, pathological anatomy, diagnosis, treatment, prognosis, outcome.

3.5. Pulmonary tuberculosis in combination with other diseases and conditions

Tuberculosis in people living with the human immunodeficiency virus (HIV) and patients with AIDS: explanation. Epidemiology of HIV-TB, the impact of tuberculosis on HIV infection. Clinical features of tuberculosis in people living with HIV, diagnosis and verification methods for HIV-associated tuberculosis. Tuberculosis prevention in people living with HIV.

Respiratory tuberculosis combined with dust-related occupational lung diseases. Tuberculosis in HIV-infected individuals and patients with AIDS. The combination of tuberculosis with diabetes mellitus, chronic nonspecific inflammatory diseases of the respiratory system, gastrointestinal diseases, mental illness, alcoholism, drug addiction, and lung cancer. Tuberculosis and motherhood.

3.6. Differential diagnosis of tuberculosis with respiratory diseases of other etiologies

General principles of differential diagnosis of respiratory tuberculosis. Differential diagnosis of primary forms of tuberculosis (tuberculosis of the intrathoracic lymph nodes, primary tuberculosis complex) with non-tuberculous diseases (pneumonia, Hodgkin's disease, lymphoma, lymphocytic leukemia, sarcoidosis).

Differential diagnosis of secondary forms of TB with pneumonia, granulomatosis (mycobacteriosis, histiocytosis X, pneumomycosis), systemic pulmonary vasculitis (Wegener's granulomatosis, Churg-Strauss syndrome, idiopathic pulmonary hemosiderosis, etc.), storage diseases, pulmonary tumor dissemination (bronchioloalveolar carcinoma, leiomyomatosis, metastatic lung disease), malformations, lung damage in systemic connective tissue diseases, suppurative pulmonary diseases, cystic fibrosis, etc.

Differential diagnosis of diseases manifested by the main radiographic syndromes (nidus, infiltration, round and annular shadows, bronchoadenopathy, dissemination, etc.).

Differential diagnosis of pleurisy, tuberculosis of the central nervous system. Differential diagnosis of acutely progressive forms of tuberculosis.

Examination of patients with respiratory disease; collection of complaints and disease history; physical examination; preparation of an examination plan; interpretation of instrumental and laboratory examination results; diagnosis; justification of a treatment plan.

3.7. Sarcoidosis of the respiratory system

Sarcoidosis: definition, epidemiology, classification, potential etiologic factors, pathogenesis, pathomorphology, clinical course variants of respiratory sarcoidosis, main clinical syndromes (Löfgren, Heerfordt-Waldenström), extrapulmonary manifestations of sarcoidosis, diagnosis, differential diagnosis. Verification of diagnosis, treatment tactics, prognosis.

3.8. Mycobacteriosis of the lungs

Mycobacteriosis of the lungs: definition of pathology, prevalence among various population groups, the importance of individual microorganisms in the development of the disease, pathomorphology, clinical course, diagnosis, differential diagnosis, treatment tactics.

4. Treatment of patients with tuberculosis of the respiratory system

Basic principles of tuberculosis treatment. Treatment regime and nutrition of patients with tuberculosis. Etiotropic treatment in tuberculosis. Anti-tuberculosis drugs, classification, methods of administration, combinations. Treatment of patients with drug resistance to TB causative agent (multiple and wide). Use of non-injecting regimes of chemotherapy of tuberculosis.

Unwanted adverse reactions to pharmacotherapy in the treatment of tuberculosis.

Organization of outpatient treatment for tuberculosis patients in urban and rural areas. Controlled chemotherapy of tuberculosis in outpatient conditions (day hospital, home treatment, video-controlled treatment). Equal access to quality treatment for all people with tuberculosis and related diseases, support for patients.

Types of surgery in tuberculosis, indications and contraindications to use. Artificial pneumothorax and pneumoperitoneum: indications for application, contraindications.

Drugs of pathogenetic therapy, indications for prescription. Palliative treatment.

5. Prevention of tuberculosis

Definition of the concept and objectives of social prevention of tuberculosis. Preventive measures of social orientation. Priority of a healthy lifestyle.

The concept of specific prevention (immunoprophylaxis) of tuberculosis. Characteristics of anti-tuberculosis vaccines BCG (BCG-M). Deadlines, indications, contraindications to vaccination, local vaccination responses. Serious adverse reactions to preventive vaccination against tuberculosis: classification, features of the clinical course, diagnosis, treatment principles.

Chemoprophylaxis of tuberculosis, contingents subject to chemoprophylaxis.

Sanitary prevention of tuberculosis. Centers of tuberculosis infection, classification, characteristic. The concept of index patient, bacterium separator, contact (contact person). Types and priority of centers of tuberculosis infection. Sanitary and anti-epidemic measures in the centers of tuberculosis infection. Characteristics, priority of contacts and their investigation. Current and final disinfection in the center of tuberculosis infection. Conducting information and education.

Infectious control in the anti-tuberculosis health organization, definition, purpose, forms (levels). Zones with high risk of infection. Rules for the use of respirators.

6. Organization of tuberculosis care for the population. Modern international strategies to combat tuberculosis

The role of healthcare organizations in the timely detection of tuberculosis. The concept of early, timely, and late detection. Organization and planning of measures for the early detection of tuberculosis among target populations. Population groups subject to mandatory radiographic examination («mandatory» and «at-risk» population groups).

The use of low-dose digital radiographic examination methods to detect respiratory pathologies. The use of the Mantoux test with 2 TU and the recombinant tuberculosis allergen skin test (Diaskintest) for the diagnosis of tuberculosis in children.

Indications for bacteriological examination of adults and children. Identification of patients with tuberculosis in risk groups and when seeking medical care.

Methods for early detection of patients with extrapulmonary forms of TB. Risk groups and the organization of their examination.

Tuberculosis dispensaries. Structure, objectives, methods, and organization of their work. Dispensary observation groups, scope and frequency of examinations, observation periods. Organization and content of anti-tuberculosis work in hospitals and outpatient clinics. Algorithm for outpatient examination of suspected tuberculosis patients.

Regulatory framework for tuberculosis care in the Republic of Belarus. Current international strategies and programs of the World Health Organization. The role of international organizations and joint efforts by countries to effectively protect people from health emergencies, including tuberculosis outbreaks. United Nations Global Tuberculosis Goals.

Medical ethics and deontology in anti-tuberculosis organizations.

ACADEMIC DISCIPLINE «PHTHISIOPULMONOLOGY» CURRICULAR CHART

Section, topic #	Section (topic) name	Number of class hours		Supervised student independent work	Literature	Practical skills	Form of control	
		lectures	practical				of practical skills	of current / intermediate assessment
	7 semester							
	Lectures		-	-				
1.1	Historical sketch of the development of the study of tuberculosis. Epidemiology of tuberculosis	1,5	-	-	1, 10			
1.1	Etiology of tuberculosis	1,5	-	1,5	1, 10			Tests
1.2	Pathogenesis and pathomorphology of tuberculosis. Immunology of tuberculosis	1,5	-	-	1, 10			
2.	Diagnosis and screening of tuberculosis patients	1,5	-	-	1, 10			
3.1	Clinical classification of tuberculosis. Clinical forms of primary tuberculosis. Immunodiagnostics	1,5	-	-	1, 10			
3.2	Clinical forms of secondary tuberculosis: focal, infiltrating tuberculosis, tuberculoma, caseous pneumonia	1,5	-	1,5	1, 10			Tests
	Practical lessons	-	**36**	-				
1. 2.	Etiology of tuberculosis. Diagnosis and methods of examination of patients with tuberculosis	-	6	-	1-3, 6, 10	1. Objective examination of patients with respiratory tuberculosis and selected extrapulmonary forms of tuberculosis. 2. Evaluation of results of laboratory and instrumental examination results.	Performing a practical skill at the patient's bedside. Presentation and defense of an educational inpatient	Tests

						3. Detection of signs of suspected tuberculosis at the screening X-ray of the chest organs and writing the radiologist's report	medical record Solving situational tasks	
3.1	Clinical classification of tuberculosis. Clinical forms of primary tuberculosis	-	6	-	1-3, 10	1. Determination of indications and contraindications for the intradermal tuberculin test Mantoux and skin test with recombinant tuberculosis allergen (diaskintest) and evaluation of their results. 2. Detection of signs of suspected tuberculosis at the screening X-ray of the chest organs and writing the radiologist's report. 3. Formulation and justification of a clinical diagnosis of tuberculosis	Solving situational tasks Presentation and defense of an educational inpatient medical record	Interview; business game based evaluation;
3.2	Clinical forms of secondary tuberculosis: focal, infiltrative tuberculosis, tuberculoma, caseous pneumonia	-	6	-	1-3, 10	1. Formulation and justification of a clinical diagnosis of tuberculosis. 2. Prescription of basic and additional examination methods for diagnosing tuberculosis. 3. Detection of signs of suspected tuberculosis at the screening X-ray of the chest organs and writing the radiologist's report	Solving situational tasks, presentation and defense of an educational inpatient medical record	Interview; business game based evaluation
3.2	Disseminated pulmonary tuberculosis	-	6	-	1-3, 10			Tests
3.3	Cavernous, fibro-cavernous, cirrhotic pulmonary tuberculosis. Complications of pulmonary tuberculosis	-	6	-	1, 3, 10			Presentation and defense of an educational inpatient medical record
4.	Treatment of patients with tuberculosis of the respiratory system	-	6	-	1, 8-10	Determination of chemotherapy regimen for different categories of patients	Solving situational tasks, filling out an educational inpatient medical record	interview; control work*

	8 semester							
	Lectures	**9**	**-**	**3**				
3.2	Disseminated pulmonary tuberculosis	1,5	-	-	1, 10			
3.3	Cavernous, fibrosis-cavernous, cirrotic pulmonary tuberculosis. Complications of pulmonary tuberculosis	1,5	-	-	1, 10			
3.4	Tuberculosis of extrapulmonary localization. Tuberculosis of the central nervous system. Tuberculosis pleurisy	1,5	-	-	1, 10			
4.	Treatment of patients with tuberculosis of the respiratory system	1,5	-	1,5	1, 10			Tests
3.5	Pulmonary tuberculosis in combination with other diseases and conditions	1,5	-	-	1, 10			
5. 6.	Tuberculosis Prevention. Organization of anti-tuberculosis assistance to the population. Modern international strategies to combat tuberculosis	1,5	-	1,5	1, 10			Tests
	Practical lessons	**-**	**24**	**-**				
3.4 3.5	Tuberculosis of extrapulmonary localization. Tuberculosis of the central nervous system. Tuberculous pleurisy. Pulmonary tuberculosis in combination with other diseases and conditions	-	6	-	1, 2, 4, 10	1. Formulation and justification of a clinical diagnosis of tuberculosis. 2. Prescription of basic and additional examination methods for diagnosing tuberculosis. 3. Evaluation of the results of the spinal fluid study	Solving situational tasks, presentation and defense of an educational inpatient medical record Filling out an educational outpatient medical record	Interview; business game-based evaluation
5.	Prevention of tuberculosis (specific, chemoprophylaxis)	-	6	-	1, 6, 10	Determination of the type and level of epidemiological hazard of the source of tuberculosis infection	Solving situational tasks	
5.	Prevention of tuberculosis (sanitary and social aspects)	-	6	-	1, 6, 10			Control work*
6.	Organization of tuberculosis care for the population. Modern international strategies to combat tuberculosis	-	6	-	7, 10			Tests. Differentiated credit

	11 semester							
	Lectures	**3**	**-**	**-**				
3.6	Differential diagnosis of tuberculosis with non-tubercular respiratory diseases	1,5	-	-	1, 10			
3.7	Sarcoidosis of the respiratory system	1,5	-	-	1, 10			
	Practical lessons	-	**35**	-				
3.6	Differential diagnosis of tuberculosis with respiratory diseases of other etiology	-	7	-	1, 3-5, 10	1. Detection of signs of suspected tuberculosis at the screening X-ray of the chest organs and writing the radiologist's report. 2. Prescription of basic and additional examination methods for diagnosing tuberculosis	Filling out an educational outpatient medical record. Solving situational tasks	Interview, business game-based evaluation; defense of the review
3.7 3.8	Sarcoidosis of the respiratory system. Diseases caused by non-tuberculosis mycobacteria (Mycobacteriosis)	-	7	-	1, 5, 10	1. Detection of signs of suspected tuberculosis at the screening X-ray of the chest organs and writing the radiologist's report. 2. Prescription of basic and additional examination methods for diagnosing tuberculosis	Filling out an educational outpatient medical record. Solving situational tasks	Interview, business game-based evaluation; defense of the review
3.6	Differential diagnosis of tuberculosis with respiratory diseases of other etiology	-	7	-	1-4, 10	1. Detection of signs of suspected tuberculosis at the screening X-ray of the chest organs and writing the radiologist's report. 2. Prescription of basic and additional examination methods for diagnosing tuberculosis	Filling out an educational outpatient medical record. Solving situational tasks	Interview, business game-based evaluation; defense of the review
3.6	Differential diagnosis of tuberculosis with respiratory diseases of other	-	7	-	1, 3, 4, 10	1. Detection of signs of suspected tuberculosis at the	Filling out an educational	Interview, business game-

	etiology					screening X-ray of the chest organs and writing the radiologist's report. 2. Prescription of basic and additional examination methods for diagnosing tuberculosis	outpatient medical record. Solving situational tasks	based evaluation; defense of the review
3.6	Differential diagnosis of tuberculosis with respiratory diseases of other etiology	-	7	-	1-4, 10	1. Detection of signs of suspected tuberculosis at the screening X-ray of the chest organs and writing the radiologist's report. 2. Prescription of basic and additional examination methods for diagnosing tuberculosis	Filling out an educational outpatient medical record. Solving situational tasks	Defense of the review, control work* Credit
		21	**95**	**6**				

*This is a mandatory form of current certification

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic (relevant):

1. Tuberculosis : educational and methodical manual / I. V. Buinevich, S. V. Goponyako – 2nd ed. – Gomel : GSMU, 2022. – 150 p.

Additional:

2. Budritsky, A. M. Phthisiopulmonology : manual / A. M. Budritsky. – Vitebsk : VGMU, 2019. – 253 p.

3. Diagnostics of tuberculosis. Modern methods of detecting the pathogen : a teaching aid / Zh. I. Krivosheeva [et al.]. – Minsk : BSMU, 2023. – 36 p.

4. Dyusmikeeva, M. I. Clinical forms of extrapulmonary tuberculosis. Tuberculous pleurisy : a teaching aid / M. I. Dyusmikeeva, Zh. I. Krivosheeva, N. A. Emelyanova. – Minsk: BSMU, 2022. – 40 p.

5. Krivosheeva, Zh. I. Sarcoidosis of the respiratory organs : a teaching aid / Zh. I. Krivosheeva, L. S. Bogush, N. V. Manovitskaya. – Minsk : BSMU, 2023. – 32 p.

6. Krivosheeva, J. I. Prevention of tuberculosis : educational and methodical manual / J. I. Krivosheeva, N. A. Yemelyanova, M. I. Dyusmikeeva. – Minsk : BSMU, 2022. – 24 p.

7. Krivosheeva, Zh. I. International strategies for combating tuberculosis : a teaching aid / Zh. I. Krivosheeva, N. A. Emelyanova, D. M. Zhurkin. – Minsk : BSMU, 2024. – 16 p.

8. WHO consolidated operational handbook on tuberculosis. Module 4 : treatment and care. Geneva : World Health Organization; 2025.

9. WHO consolidated guidelines on tuberculosis. Module 2 : screening – systematic screening for tuberculosis disease. Geneva : World Health Organization; 2021.

Electronic courseware for the academic discipline «Phthisiopulmonology»:

10. https://etest.bsmu.by/course/view.php?id=617.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

The time allocated for independent work can be used by students for:

preparing for lectures, practical classes;

preparation for the credit and differentiated credit on the academic discipline;

study of topics (questions) for self-study;

problem solving;

preparing thematic reports, abstracts, presentations;

preparation of tests by students for the organization of mutual knowledge assessment.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF SUPERVISED STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

Main forms of supervised student independent work:

preparation and presentation of abstracts;

taking notes of original sources (sections of reading books, collections of documents, monographs, teaching aids);

preparation of tests for the organization of mutual assessment;

training and participation in active forms of training.

Control of supervised student independent work is carried out in the form of:

control work;

testing;

discussion of abstracts;

protection of training assignments;

evaluation of the oral response to a question, communication, report or task;

reviews of abstracts, written reports;

verification of medical records;

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms of current certification are used to diagnose competencies:

control work;

tests;

interview;

business game-based evaluation;

defense of the review;

solving situational tasks;

LIST OF AVAILABLE TEACHING METHODS

Traditional method;

active (interactive) methods:

Case-Based Learning (CBL).

LIST OF PRACTICAL SKILLS

Name of practical skills	Form of practical skills control
1. Objective examination of patients with respiratory tuberculosis and selected extrapulmonary forms of tuberculosis	Performing a practical skill at the patient’s bedside
2. Detection of signs of suspected tuberculosis at the screening X-ray of the chest organs and writing the radiologist's report	Solving situational tasks

Name of practical skills	Form of practical skills control
3. Prescription of basic and additional examination methods for diagnosing tuberculosis	Filling out an educational outpatient medical record. Solving situational tasks
4. Determination of indications and contraindications for the intradermal tuberculin test Mantoux and skin test with recombinant tuberculosis allergen (diaskintest) and evaluation of their results	Solving situational tasks
5. Formulation and justification of a clinical diagnosis of tuberculosis	Solving situational tasks, presentation and defense of an educational inpatient medical record
6. Evaluation of the results of the spinal fluid study	Solving situational tasks, filling out an educational inpatient medical record
7. Evaluation of results of laboratory and instrumental examination results	Solving situational tasks, presentation and defense of an educational inpatient medical record
8. Determination of chemotherapy regimen for different categories of patients	Solving situational tasks, filling out an educational inpatient medical record
9. Determination of the type and level of epidemiological hazard of the source of tuberculosis infection	Solving situational tasks

PROTOCOL OF THE CURRICULUM APPROVAL BY OTHER DEPARTMENTS

Title of the discipline requiring approval	Department	Amendments to the curriculum in the academic discipline	Decision of the department, which designed the curriculum (date, protocol #)
1. Internal Diseases	Internal Diseases, Gastroenterology and Nutrition with a course for advanced training and retraining	No offers	Protocol № 26a of 14.05.2026
2. Infectious Diseases	Infectious Diseases with a course for advanced training and retraining	No offers	Protocol № 26a of 14.05.2026

COMPILERS/AUTHORS:

Head of the Department of Pulmonology, Phthisiatry, Allergology and Occupational Pathology with a course for advanced training and retraining of the Educational Institution «Belarusian State Medical University», D.Sc., Professor _____ E.A.Lapteva

Associate Professor of the Department of Pulmonology, Phthisiatry, Allergology and Occupational Pathology with a course for advanced training and retraining of the Educational Institution «Belarusian State Medical University», PhD, Associate Professor _____ Zh.I.Krivosheeva

Senior Lecturer of the Department of Pulmonology, Phthisiatry, Allergology and Occupational Pathology with a course for advanced training and retraining of the Educational Institution «Belarusian State Medical University» _____ N.A.Emelyanova

Senior Lecturer of the Department of Pulmonology, Phthisiatry, Allergology and Occupational Pathology with a course for advanced training and retraining of the Educational Institution «Belarusian State Medical University» _____ T.O.Smolenskaya

Curriculum content, composition and the accompanying documents comply with the established requirements.

Head of the Department of Educational Activities of the Educational Institution «Belarusian State Medical University» I.L.Kotovich

Methodologist of the Educational and Methodological Department of the Office of Educational Activities of the Educational Institution «Belarusian State Medical University» S.V.Zaturanova