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**Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
NAMED AFTER PATRICE LUMUMBA
RUDN University
Institute of Medicine**

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

PHTHIOLOGY

course title

Recommended by the Didactic Council for the field of study/specialty:

31.05.01 GENERAL MEDICINE

field of studies / speciality code and title

The course instruction is implemented within the professional education programme of higher education:

GENERAL MEDICINE

higher education programme profile/specialisation title

1. COURSE GOAL(s)

The course "Phthiology" is included in the Specialist program "General Medicine" in the field of study 31.05.01 "General Medicine" and is studied in the 11th and 12th semesters of the 6th year. The course is implemented by the Department of Infectious Diseases with Courses in Epidemiology and Phthiology. The course consists of 8 modules and 26 topics and is aimed at studying tuberculosis and developing the competences necessary for a physician in the specialty of general medicine for practical activities when providing care to patients with phthiological pathology.

The goal of mastering the course is to prepare a general practitioner who is knowledgeable in the detection and diagnosis of tuberculosis. A general practitioner must be able to identify or suspect tuberculosis of pulmonary and extrathoracic localization; make a preliminary diagnosis; carry out a set of diagnostic, therapeutic and anti-epidemic measures at the pre-hospital stage; have an understanding of dispensary follow-up and treatment of a tuberculosis patient, as well as the main directions of tuberculosis prevention.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course "Phthiology" is aimed at developing the following competences (parts of competences) in students:

Table 2.1. List of competences developed in students during mastery of the course (learning outcomes)

Competence code	Competence descriptor	Competence formation indicators (within this course)
GPC-5	Able to assess morphofunctional, physiological states and pathological processes in the human body to solve professional tasks	GPC-5.1 Masters the algorithm of clinical-laboratory and functional diagnostics when solving professional tasks; GPC-5.2 Able to evaluate the results of clinical-laboratory and functional diagnostics when solving professional tasks, including using artificial intelligence technologies; GPC-5.3 Able to determine morphofunctional, physiological states and pathological processes in the human body based on knowledge of the structure of the

		human body, functioning of organs and systems in health and disease;
PC-2	Able to conduct a patient examination to establish a diagnosis	<p>PC-2.1 Masters the skills of collecting complaints, life and disease history of the patient, as well as conducting a complete physical examination of the patient (inspection, palpation, percussion, auscultation);</p> <p>PC-2.2 Able to formulate a preliminary diagnosis and develop a plan for laboratory and instrumental examinations of the patient;</p> <p>PC-2.3 Able to refer the patient for laboratory examination if there are medical indications in accordance with current procedures for providing medical care, clinical recommendations (treatment protocols) on medical care provision, taking into account medical care standards;</p> <p>PC-2.4 Able to refer the patient for instrumental examination if there are medical indications in accordance with current procedures for providing medical care, clinical recommendations (treatment protocols) on medical care provision, taking into account medical care standards;</p> <p>PC-2.5 Able to refer the patient for consultation with specialist physicians if there are medical indications in accordance with current procedures for providing medical care, clinical recommendations (treatment protocols) on medical care provision, taking into account medical care standards;</p> <p>PC-2.6 Able to refer the patient for specialized medical care in inpatient settings or day hospital settings if there are medical indications in accordance with current procedures for providing medical care, clinical</p>

		<p>recommendations (treatment protocols) on medical care provision, taking into account medical care standards;</p> <p>PC-2.7 Able to conduct differential diagnosis with other diseases/conditions, including emergency ones, as well as establish a diagnosis taking into account the current International Statistical Classification of Diseases and Related Health Problems (ICD);</p>
PC-3	Able to prescribe treatment and monitor its effectiveness and safety	<p>PC-3.1 Able to develop a treatment plan for a disease or condition taking into account the diagnosis, age and clinical picture in accordance with current procedures for providing medical care, clinical recommendations (treatment protocols) on medical care provision, taking into account medical care standards;</p>
PC-5	Able to conduct and monitor the effectiveness of measures for prevention and promotion of a healthy lifestyle and sanitary and hygienic education of the population	<p>PC-5.2 Able to organize and monitor the immunoprophylaxis of infectious diseases in the adult population in accordance with current procedures for providing medical care, clinical recommendations (treatment protocols) on medical care provision, taking into account medical care standards;</p> <p>PC-5.6 Able to monitor compliance with preventive measures;</p> <p>PC-5.7 Able to determine medical indications for the introduction of restrictive measures (quarantine) and indications for referral to a specialist physician in the event of infectious (parasitic) diseases;</p> <p>PC-5.8 Able to complete and send to the territorial body of the Federal Service for Supervision of Consumer Rights Protection and Human Welfare an emergency notification upon detection of an infectious or occupational disease;</p>

		<p>PC-5.9 Able to carry out anti-epidemic measures in the event of an outbreak of infection, including quarantine measures upon detection of particularly dangerous (quarantine) infectious diseases;</p> <p>PC-5.11 Able to evaluate the effectiveness of preventive work with patients;</p>
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3.COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course refers to the core/variable/elective* component of (B1) block of the higher educational programme curriculum.

* - Underline whatever applicable.

Within the higher education programme students also master other (modules) and / or internships that contribute to the achievement of the expected learning outcomes as results of the course study.

Table 3.1. The list of the higher education programme components/disciplines that contribute to the achievement of the expected learning outcomes as the course study results

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
GPC-5	Able to assess morphofunctional, physiological states and pathological processes in the human body to solve professional tasks	Ophthalmology; Propedeutics of Internal Diseases; Medical Elementology; Obstetrics and Gynecology; Biochemistry; Immunology; Otorhinolaryngology; General Surgery; Pediatrics; Pharmacology; Anatomy; Topographic Anatomy and Operative Surgery; Histology, Embryology, Cytology; Normal Physiology; Microbiology, Virology; Pathophysiology, Clinical Pathophysiology; Radiation Diagnostics; Bioorganic Chemistry; Methods of Cell Biology and Histology; Methods of Microbiological Diagnostics; Molecular Genetic Methods; Pathological Anatomy, Clinical Pathological Anatomy; Biology; Chemistry;	
PC-2	Able to conduct a patient examination to establish a diagnosis	Medical Enzymology; Molecular Genetics in Practical Biology and Medicine ; Ophthalmology; Propedeutics of Internal Diseases; Medical Elementology; Obstetrics and Gynecology; Immunology; Infectious Diseases; Otorhinolaryngology; General Surgery;	

		<p>Pediatrics; Faculty Therapy; Faculty Surgery; Occupational Diseases; Microbiology, Virology; Pathophysiology, Clinical Pathophysiology; Neurology, Medical Genetics, Neurosurgery; Psychiatry, Medical Psychology; Outpatient Therapy; Hospital Surgery, Pediatric Surgery; Traumatology, Orthopedics; Evidence-Based Medicine; Radiation Diagnostics; Dermatovenereology; Clinical Dentistry; Current Issues of Neonatology; Topical Issues of Neonatology; Cardiology in Quests; Methods of Microbiological Diagnostics; Molecular Genetic Methods; Pathological Anatomy, Clinical Pathological Anatomy; Hospital Therapy; Urology; Private Radiology; Surgical practice: surgeon's assistant; Obstetric and gynecological practice: gynecologist's assistant; Therapeutic practice: therapist's assistant; General practice practice: assistant physician of an outpatient clinic; Obstetric and gynecological practice: obstetrician's assistant; General practice practice: assistant pediatrician;</p>	
PC-3	Able to prescribe treatment and monitor its effectiveness and safety	<p>Introduction to Nutriciology; Fundamentals of Nutriciology of Childhood; Ophthalmology; Obstetrics and Gynecology; Infectious Diseases; Otorhinolaryngology; Pediatrics; Faculty Therapy; Pharmacology; Faculty Surgery; Occupational Diseases; Fundamentals of Integrative Medicine; Neurology, Medical Genetics, Neurosurgery; Psychiatry, Medical Psychology; Outpatient Therapy; Hospital Surgery, Pediatric Surgery; Traumatology, Orthopedics; Dermatovenereology; Current Issues of Neonatology; Topical Issues of Neonatology; Experimental Oncology; Cardiology in Quests; Fundamentals of Therapeutic Nutrition; Geriatrics and Palliative Medicine; Clinical Trials; Clinical Studies**; Hospital Therapy; Urology; Mechanisms of Drug Action; Surgical practice: surgeon's assistant; Obstetric and gynecological practice: gynecologist's assistant; Therapeutic practice: therapist's assistant; General practice practice: assistant physician of an outpatient clinic; Obstetric and gynecological practice: obstetrician's assistant; General practice practice: assistant pediatrician;</p>	

PC-5	Able to conduct and monitor the effectiveness of measures for prevention and promotion of a healthy lifestyle and sanitary and hygienic education of the population	Introduction to Nutriciology; Fundamentals of Nutriciology of Childhood ; Ophthalmology; Propedeutics of Internal Diseases; Organization of Special Patient Care; Obstetrics and Gynecology; Infectious Diseases; Pediatrics; Epidemiology; Occupational Diseases; Hygiene; Neurology, Medical Genetics, Neurosurgery; Outpatient Therapy; Dermatovenereology; Clinical Dentistry; Fundamentals of Psychophysiology**; Urology; General practice practice: assistant physician of an outpatient clinic; General practice practice: assistant pediatrician;	
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* To be filled in according to the competence matrix of the higher education programme.

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course “**Phthisiology**” is 4 credits (144 academic hours).

*Table 4.1. Types of academic activities during the periods of higher education programme mastering (full-time training)**

Type of academic activities	Total academic hours	Semesters/training modules	
		11	12
<i>Contact academic hours</i>	99	51	48
<i>Including:</i>			
Lectures (LC)			
Lab work (LW)	99	51	48
Seminars (workshops/tutorials) (S)			
<i>Self-studies, academic hours:</i>	33	18	15
<i>Evaluation and assessment (exam/passing/failing grade)</i>	12	3	9
Course workload	academic hours	144	72
	credits	4	2

* To be filled in regarding the higher education programme correspondence training mode.

5. COURSE CONTENTS

Table 5.1. Course contents and academic activities types

Course module title	Course module contents (topics)	Academic activities types
Module 1 Introduction to the speciality	1.1. History of tuberculosis studies. Current epidemiological situation worldwide and in the Russian Federation. TB etiology, species properties of mycobacteria	LC, S
	1.2. TB pathogenesis. Idea of active TB and latent TB infection. Pathological anatomy of tuberculosis	LC, S
Module 2 TB prevention.	2.1. Social prevention of TB	LC, S
	2.2. Immunization for TB. Anti-TB immunity properties.	LC, S
	2.3. Contact tracing. Treatment of latent TB infection.	LC, S
	2.4. Anti-TB infection control	LC, S
Module 3 Early TB detection	3.1 Measures for early TB detection in adults.	S
	3.2 Measures for early TB detection in children and adolescents.	S
Module 4 TB diagnostics	4.1 Clinical manifestation of TB, peculiarities of respiratory and intoxication syndromes. Microbiological diagnostics of TB.	S
	4.2 Radiological diagnostics of pulmonary TB. Laboratory and instrumental methods for TB diagnostics. Diagnostic algorithm. Immunological tests (tuberculin skin test, IGRA-tests).	S
Module 5 TB healthcare. Treatment of TB	5.1 Outpatient TB department: aims and functions.	LC, S
	5.2 Contact tracing. Epidemiological measures for prevention of TB spreading.	LC, S
	5.3 TB treatment: anti-TB drugs, treatment regimens.	LC, S
Module 6 TB classification. Primary TB in children and adolescents. Post-primary pulmonary TB	6.1 TB classification (Russian, WHO, ICD-10). Primary TB in children: clinical forms, peculiarities of diagnostics and manifestation.	LC, S
	6.2 Clinical-radiological features of small forms of TB.	LC, S
	6.3 Clinical-radiological features of infiltrative TB.	LC, S
	6.4 Clinical-radiological features of disseminated TB.	S
	6.5 Clinical-radiological features of big forms of TB.	S
	6.6 Clinical-radiological features of chronic forms of TB.	S
Module 7 Extrapulmonary TB	7.1 Pathogenesis of extrapulmonary TB. TB meningoencephalitis.	S
	7.2 TB of urogenitary tract. TB of bones and joints.	S
	7.3 Abdominal TB. TB of peripheral lymph nodes.	S
Module 8 TB in special groups of patients	8.1 Clinical and radiological peculiarities of TB in HIV-positive patients depending on the degree of immunosuppression. Specific features of TB diagnostics in HIV-positive patients	S
	8.2 TB in pregnant women: peculiarities of manifestation, diagnostics and treatment.	S
	8.3 TB and diabetes mellitus	S

Course module title	Course module contents (topics)	Academic activities types
	8.4 TB in patients receiving immunosuppressive treatment.	S

* - to be filled in only for **full**-time training: *LC* - lectures; *LW* - lab work; *S* - seminars.

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Classroom equipment and technology support requirements

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
Lab-work	Classroom for conducting lab work, individual consultations, ongoing assessment and interim certification, equipped with a set of specialized furniture and equipment.	Classroom for conducting lecture and seminar-type classes, group and individual consultations, ongoing assessment and interim certification. Set of specialized furniture; technical equipment: multimedia projector, laptop, internet access available. Software: Microsoft products, Yandex Telemost.
Seminar	Classroom for conducting seminar-type classes, group and individual consultations, ongoing assessment and interim certification, equipped with a set of specialized furniture and multimedia presentation technical equipment.	
Self-studies	Classroom for self-studies of students (may be used for seminar classes and consultations), equipped with a set of specialized furniture and computers with access to the Electronic Information and Educational Environment.	Set of specialized furniture; technical equipment: internet access available.

7. RECOMMENDED SOURCES FOR COURSE STUDIES

Main readings:

1. Phthisiatry : textbook / V.A. Koshechkin. - Книга на английском языке. - Moscow : GEOTAR-Media, 2019. - 256 с. - ISBN 978-5-9704-5302-5
2. Madhukar Pai. Let's talk TB – 3d edition. 2018, 119p. <http://www.letstalktb.org/>
3. Toman's tuberculosis: case detection, treatment and monitoring: questions and answers (2nd edition). 2004. <https://apps.who.int/iris/handle/10665/42701>
4. Tuberculosis: Current Issues in Diagnosis and Management <http://www.e-booksdirectory.com/details.php?ebook=8772>
5. WHO consolidated guidelines on tuberculosis. Module 4: treatment and care. Geneva: World Health Organization 2025., 458 p. <https://www.who.int/publications/i/item/9789240107243>
6. WHO consolidated guidelines on tuberculosis. Module 6: tuberculosis and comorbidities, second edition, 150 p. <https://www.who.int/publications/i/item/9789240111967>

Additional readings:

Printed publications:

1. C.L. Daley, M.B. Gotway, R.M. Jasmer. Radiographic manifestation of tuberculosis – 2nd edition. Curry International Tuberculosis Centre. 2011, 111p.
2. Ermolitskiy N.M. Radiology. Teaching workbook for 3rd year students of the Faculty of preparation of experts for foreign countries of medical higher educational institutions – Gomel, GomSMU, 2016. p. 1. 108 p.
3. D.Heemskerck, M.Caws, B.Marais, J.Farrar. Tuberculosis in adults and children. SpringerOpen. 2015, 63p. <https://link.springer.com/book/10.1007/978-3-319-19132-4>
4. WHO guidelines (and associated standards) on tuberculosis <http://www.who.int/publications/guidelines/tuberculosis/en/>

Internet-based sources:

1. Electronic libraries with access for RUDN students:
 - Electronic library system RUDN – ELS RUDN <http://lib.rudn.ru/MegaPro/Web>
 - ELS «University library online » <http://www.biblioclub.ru>
 - ELS Urait <http://www.biblio-online.ru>
 - ELS «Student's consultant» www.studentlibrary.ru
 - ELS «Lan» <http://e.lanbook.com/>

Learning toolkits for self-studies in the RUDN LMS TUIS*:

1. Lecture course on the discipline "Phthisiology".

- all learning toolkits for self-studies of students are placed in accordance with the current procedure on the course page in the TUIS!

DEVELOPERS:

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position, department

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