MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY
Department of phthisiopulmonology

«APPROVED»
Vice-rector for scientific and pedagogical work
_____ Eduard BURIACHKIVSKYI
"_____"_____2023

WORKING PROGRAM IN THE DISCIPLINE "PHTHISIOLOGY"

Higher education level: second (master's)
Area of expertise: 22 "Health care"
Specialty: 221 "Stomatology"
Educational and professional program: Stomatology

Odesa

The program is based on the educational and professional program "Stomatology", training of specialists of the second (master's) level of higher education in specialty 221 "Stomatology" of the branch of knowledge 22 "Health", approved by the Academic Council of ONMedU, dated 29.06.2023, protocol No. 8.

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The work program was approved at a meeting of the Department of phthisiopulmonology
Minutes No. 1, dated 30.08.2023

Head of the Department, professor _____ Nina MATSEGORA

Agreed with the guarantor of the EPP _____ Anatoliy GULYUK

Approved by the subject cyclic methodical commission on stomatological disciplines
ONMedUProtocol No. 1 dated 31.08.2023

Head of the subject cyclic methodical commission on stomatological disciplines ONMedU

_____Volodymyr KRYKLYAS

Reviewed and approved at the department meeting Department of occupational diseases and functional diagnostics and phthisiopulmonology

Minutes No. 1, dated «04» 09 2023

Head of the Department, professor _____ Oleksandr Ignatiev
(signature) (First Name SURNAME)

Reviewed and approved at the department meeting _____
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Minutes No. ___, dated «___»_____20__

Head of the Department, professor _____ _____
(signature) (First Name SURNAME)

1. Description of the discipline

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the discipline
Total number: Credits of ECTS: 1 Hours: 30 Content modules: 2	Field of knowledge 22 «Health care» Specialty 221 «Stomatology» Level of higher education second (master's degree)	*Full-time (day) education* *Compulsory discipline*
		Course: 4
		Semester: VII- VIII
		Lectures (4 hours)
		Seminars (0 hours)
		Practical classes (14 hours)
		Laboratories (0 hours)
		Independent work (12 hours)
		including individual tasks (0 hours)
		Form of final control – Credit Test

2. **The purpose and tasks of the educational discipline, competencies, program learning outcomesThe purpose is** the student's acquisition of knowledge and the formation of elements of professional competences in the field of phthisiology and improvement of skills and competences acquired during the study of previous disciplines.

The tasks of the discipline are the following:

1. Mastering the basic measures necessary for organizing work in the dental department andensuring the prevention of the occurrence and spread of tuberculosis infection.
2. Learning the algorithm of actions of doctors of institutions of the general medical networkregarding the detection of tuberculosis when patients seek help.
3. Mastering the main preventive measures in centers of tuberculosis infection.
4. Acquisition of practical skills for diagnosis and differential diagnosis of tuberculosis of themucous membrane of the oral cavity and maxillofacial localization.
5. Acquisition of skills and abilities to examine a tuberculosis patient and record the resultsin the relevant medical documentation.
6. Formation of moral and ethical and deontological qualities during professionalcommunication with the patient.

The process of studying the discipline is aimed at forming elements of the followingcompetencies:

- **General competencies:**

  IR - The ability to solve typical and complex specialized tasks and problems in the field of health care in the specialty "Dentistry", in professional activity or in the learning process, which involves conducting research and/or implementing innovations and is characterized by the complexity

and uncertainty of conditions and requirements .

GC 2 - Knowledge and understanding of the subject area and understanding of professionalactivity.

GC 7 - Ability to search, process and analyze information from various sources.

GC 8 - Ability to adapt and act in a new situation.

- **Special competencies are:**

SC1 - Ability to collect medical information about the patient and analyze clinical data.

SC2 - Ability to interpret the results of laboratory and instrumental studies.

{{ 1}} SC3 - Ability to diagnose: determine preliminary, clinical, final, concomitant diagnosis, emergencies

SC3. - Ability to diagnose: determine preliminary, clinical, final, accompanying diagnosis, emergency conditions.

SC6 - Ability to determine the rational mode of work, rest, diet in patients in the treatment oftuberculosis of the oral cavity and maxillofacial region.

SC7 - Ability to determine the tactics of management patients with tuberculosis of organs and tissues of the oral cavity and maxillofacial region with concomitant somatic diseases.

SC14 - Ability to maintain regulatory medical records.SC15 - , social and medical information.

SC16 - Ability to organize and conduct rehabilitation measures and care for patients withtuberculosis of the oral cavity and SLE.

Program learning outcomes are:

PLO1. Identify and identify leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary patient history data, patient examination data, knowledge about a person, his organs and systems, to establish a probable nosological or syndromic preliminary clinical diagnosis of dental

PLO2. Collect information about the patient's general condition, evaluate the patient's psychomotor and physical development, the condition of the maxillofacial organs, based on the results of laboratory and instrumental studies, evaluate information about the diagnosis (according to list 5).

PLO4. Determine the final clinical diagnosis in compliance with the relevant ethical and legal norms, by making a reasoned decision and logical analysis of the received subjective and objectivedata of clinical, additional examination, carrying out differential diagnosis under the control of the head physician in the conditions of a medical institution (according to list 2.1).

PLO7. Analyze the epidemiological situation and carry out mass and individual, general and local drug and non-drug prevention measures for dental diseases.

PLO20. To organize the required level of individual safety (own and the persons he cares for) in case of typical dangerous situations in the individual field of activity

PLO21. Perform medical manipulations on the basis of a preliminary and/or final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 6).

As a result of studying the academic discipline, the student of higher education must:

Know: Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention of tuberculosis.

Be able:

- Collect data on patient complaints, medical history, life history of tuberculosis patients
- Evaluate information about the diagnosis, using a standard procedure, based on the results of laboratory and instrumental studies. Determine the list of necessary clinical and laboratory and instrumental studies and evaluate their results.
- Identify the leading clinical symptom or syndrome, establish a preliminary diagnosis, perform differential diagnosis and determine the clinical diagnosis of tuberculosis
- Diagnose emergency conditions.
- Plan and carry out preventive and anti-epidemic measures regarding tuberculosis.
- Determine the management tactics of persons subject to dispensary supervision (children, pregnant women, workers whose professions require mandatory dispensary examination).

3. Contents of the discipline

Content module 1. General questions of Phtisiology. Organization of medicare by patients with tuberculosis: detection, diagnostics, treatment, prophylaxis, dispensary supervision.

Theme 1. Epidemiology, etiology and pathogenesis of tuberculosis/ Clinical classification oftuberculosis.

Epidemiology situation from tuberculosis in Ukraine and world. Basic epidemiology indexes from tuberculosis: infection, morbidity, sickliness and death rate. Causative agent of tuberculosis, his kinds and forms of existence (L-forms), property. Sources MBT, ways of infection and distributions in an organism. Pathogenesis and immunomorphology of tuberculosis.

Types of tubercular process. Localization, phases of process, etiologic and histological confirmation of diagnosis, category observation of TB patients.

Theme 2. Organization of the TB detection and diagnostics.Tuberculinodiagnostics.

Clinical diagnostics, basic symptoms and syndromes of tuberculosis. Bacteriology of smear and culture method of finding MBT. Histological examination of tissue in diagnostics of tuberculosis. Radial and tuberculin diagnostics of tuberculosis. To interpret the aims of tuberculinodiagnosis.

Analyze the results of the Mantoux Test with 2 TU of PPD-L.To explain a concept of virage of tuberculin test and it smeaning for early diagnostics of tuberculosis.

Theme 3. General clinical methods of TB diagnostics. Special methods of the TB detection and diagnostics (laboratory diagnostics, X-ray diagnostics).

The role of bacterioscopic and bacteriological methods of research of sputum, etermine thetype of stable of MBT by bacteriological research, analyze basic roentgenologic syndromes in the clinic of tuberculosis, tactic of doctors of general medical clinicals to patients by their roentgenologic inspection and bacterioscopic research of sputum. Analyze the basic indexes of function of the external breathing.

Theme 4. TB treatment. Treatment of tuberculosis of mucous membrane of

the oral cavity and

maxilla and mandible bones.

To interpret basic principles of treatment of patients with tuberculosis. Medical treatment of tuberculosis of mucous membrane of the oral cavity and maxilla and mandible bones. Basic antituberculous preparations, standard scheme of medical treatment of tuberculosis.

Theme 5. Prophylaxis of tuberculosis.

Prophylaxis of tuberculosis: social, sanitary, specific. Determination of risk factors of tuberculosis. determine indications and contraindication to the BCG vaccination.The epidemiology danger in the place of tuberculosis infection. Using the complex of prophylactic measures in the place of tuberculosis infection.

Content module 2. Clinical forms of tuberculosis: primary, secondary, tuberculosisof mucous membrane of the oral cavity.

Theme 6. Pulmonary tuberculosis: primary and secondary clinical forms.

Tuberculosis of pulmonary localization. The basic roentgenologic syndromes at the primary forms of tuberculosis. The diagnosis of primary forms of tuberculosis on the basis of anamnesis, clinic, roentgenologic, laboratory information. Complication of primary forms of tuberculosis. The basic roentgenologic syndromes at the second forms of tuberculosis. The diagnosis of the second forms of tuberculosis on the basis of anamnesis, clinic, roentgenologic, laboratory information.

Theme 7. Complications of clinical forms of tuberculosis. Tuberculosis of mucousmembraneof the oral cavity. Tuberculosis of maxilla and mandible bones.

Diagnosis of complications of the second forms of tuberculosis.

Tuberculosis of mucous membrane of the oral cavity.

Tuberculosis of submandible lymph nodes.Tuberculosis of maxilla and mandible bones. Urgent condition at tuberculosis.Clinical course, clinical symptoms and syndromes, diagnostics.

4. The structure of the educational discipline

Themes	Number of hours					
	Total	including				
		lectures	seminars	practical classes	laboratories	Independent work
Content module 1. General questions of phtisiology. Organization of medicareby patients with tuberculosis: detection, diagnostics, treatment, prophylaxis.						
Theme 1. Epidemiology, etiology and pathogenesis of tuberculosis. Clinical classification oftuberculosis.	5	2	0	2	0	1
Theme 2. Organization of the TB detection and diagnostics. Tuberculinodiagnostics.	4	1	0	2	0	1
Theme 3. General clinical methods of TB diagnostics. Special methods of the TB detection and diagnostics (laboratory diagnostics, X-ray diagnostics).	4	1	0	2	0	1

Theme 4. TB treatment. Treatment of tuberculosis of mucous membrane of the oral cavity and maxilla and mandible bones.	3	0	0	2	0	1
Theme 5. Prophylaxis of tuberculosis.	4	0	0	2	0	2
Total by content module 1	**20**	**4**	**0**	**10**	**0**	**6**
Content module 2. Clinical forms of tuberculosis: primary, secondary, tuberculosis of mucous membrane of the oral cavity.						
Theme 6. Pulmonary tuberculosis: primary and secondary clinical forms.	6	0	0	2	0	4
Theme 7. Complications of clinical forms of tuberculosis. Tuberculosis of mucous membrane of the oral cavity. Tuberculosis of maxilla and mandible bones.	4	0	0	2	0	2
Total by content module 2	**10**	**0**	**0**	**4**	**0**	**6**
Total hours	**30**	**4**	**0**	**14**	**0**	**12**

5. Themes of lectures / seminars / practical classes / laboratories

5.1. Themes of lectures

No.	Theme	Hours
1.	Definition of tuberculosis as a scientific and practical problem. History of phthisiology. Tuberculosis epidemiology. Etiology, pathogenesis of tuberculosis. Immunity in tuberculosis. Detection and diagnostics of tuberculosis.	2
2.	Diagnosis of tuberculosis. Tuberculosis of the mucous membrane of the oral cavity and maxillofacial localization: pathogenesis, clinic, diagnosis.	2
	Total	**4**

5.2. Themes of seminars

Seminars are not provided.

5.3. Themes of practical classes

No.	Theme	Hours
	Content module 1. General issues of phthisiology.	
1.	Theme 1. Practical class 1. Epidemiology of tuberculosis. Etiology, pathogenesis of tuberculosis. Clinical classification of tuberculosis.	2
2.	Theme 2. Practical class 2. Organization of the TB detection and diagnostics. Tuberculinodiagnostics. Examine of the TB patients.	2
3.	Theme 3. Practical class 3. General clinical methods of TB diagnostics. Special methods of the TB detection and diagnostics (laboratory diagnostics, X-ray diagnostics). Examine of the TB patients.	2

4.	Theme 4. Practical class 4. General principles of the treatment. Antimycobacterial preparation. Treatment of tuberculosis of mucous membrane of the oral cavity and maxilla and mandiblebones. Examine of the TB patients.	2
5.	Theme 5. Practical class 5. Prophylaxis of tuberculosis. Dispensary observation. Examine of the TB patients.	2
Content module 2. Clinical forms of tuberculosis: primary, secondary, tuberculosis of mucous membrane of the oral cavity.		
6.	Theme 6. Practical class 6. Pulmonary tuberculosis: primary clinical forms. Theme 6. Practical class 6. Pulmonary tuberculosis: secondary clinical forms.	2
7.	Theme 7. Practical class 7. Complications of clinical forms of tuberculosis. Tuberculosis of mucous membraneof the oral cavity. Tuberculosis of maxilla and mandible bones.	2
	Total	**14**

5.4. Themes of laboratories

Laboratories are not provided.

6. Independent work of the student

No.	Theme	Hours
Content module 1. General issues of phthisiology.		
1.	Theme 1. Preparation for practical classes 1	1
2.	Theme 2. Preparation for practical classes 2	1
3.	Theme 3. Preparation for practical classes 3	1
4.	Theme 4. Preparation for practical classes 4	1
5.	Theme 5. Preparation for practical classes 5	2
Content module 2. Clinical forms of tuberculosis: primary, secondary, tuberculosis of mucous membrane of the oral cavity.		
6.	Theme 6. Preparation for practical classes 6	4
7.	Theme 7. Preparation for practical classes 7	2
	Total	**12**

7. Teaching methods

Lectures: reveal problematic issues of the relevant subdivisions of the discipline. Lecturers can use such variants of lectures as educational, informative, lecture-visualization, lecture-discussion, lecture-consultation.

Practical classes: oral and written interviews, solving clinical situational problems, practicing patientexamination skills, solving test tasks.

Independent work: independent work with the recommended basic and additional literature, with electronic information resources, independent work with the bank of Step-2 test tasks, independentsolution of clinical tasks.

8. Forms of control and evaluation methods (including criteria for evaluating learning outcomes)

Current control: oral survey, testing, solution of situational clinical tasks, assessment of activity inclass.
Final control: Credit Test
Evaluation of the current educational activity in a practical session:
1. Evaluation of theoretical knowledge on the subject of the lesson:
   - methods: survey, solving a situational clinical problem
   - maximum score – 5, minimum score – 3, unsatisfactory score – 2.
2. Assessment of practical skills:
   - the ability to properly treat the patient, prescribe and interpret the results of laboratory and instrumental examination, justify the diagnosis based on the analysis of clinical and auxiliary methods of examination.
   - maximum score – 5, minimum score – 3, unsatisfactory score – 2.

The grade for one practical session is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Criteria of ongoing assessment at the practical class

«5»	The student is fluent in the material, takes an active part in the discussion and solution of the situational clinical problem, confidently demonstrates practical skills when examining a sick child and interpreting data from clinical, laboratory and instrumental studies, expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
«4»	The student has a good command of the material, takes part in the discussion and solution of the situational clinical problem, demonstrates practical skills when examining a sick child and interpreting the data of clinical, laboratory and instrumental studies with some errors, expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
«3»	The student does not have sufficient knowledge of the material, he takes part in the discussion and solution of the situational clinical problem, demonstrates practical skills when examining a sick child and interpreting data from clinical, laboratory and instrumental studies with significant errors.
«2»	The student does not own the material, does not take part in the discussion and solution of the situational clinical problem, does not demonstrate practical skills when examining a sick child and interpreting data from clinical, laboratory and instrumental studies.

Independent extracurricular work of applicants is evaluated at a corresponding practical session or at the final inspection with the mandatory display of the procedure of this type of inspection in the work program.

Credit Test. Students who have completed the curriculum in the discipline in full, have no academic debt, have a current grade point average of 3.00 or more, and receive a credit in the last class, which is presented as "passed" / "failed". Conversion of a traditional national assessment into a multi-point (maximum 200 points) is mandatory.

If a student has received a minimum grade point average of 3.00 for the current performance, even in the case of unworked unsatisfactory grades, he receives credit.

9. Distribution of points received by the student

The obtained average score for the academic discipline for applicants who have successfully mastered the work program of the academic discipline is converted from a traditional four-point scale to points on a 200-point scale, as shown in the table:

Conversion table of traditional to multi-point

National score for the discipline	The sum of scores for the discipline
Excellent («5»)	185 – 200
Good («4»)	151 – 184
Satisfactory («3»)	120 – 150
Unsatisfactory («2»)	Less than 120

A multi-point scale (200-point scale) characterizes the actual success of each applicant in learning the educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is performed by the information and technical department of the University. According to the obtained points on a 200-point scale, the achievements of the applicants are evaluated according to the ECTS rating scale. Further ranking according to the ECTS rating scale allows you to evaluate the achievements of students from the educational component who are studying in the same course of the same specialty, according to the points they received.
The ECTS scale is a relative-comparative rating, which establishes the applicant's belonging to the group of better or worse among the reference group of fellow students (faculty, specialty). An "A" grade on the ECTS scale cannot be equal to an "excellent" grade, a "B" grade to a "good" grade, etc. When converting from a multi-point scale, the limits of grades "A", "B", "C", "D", "E" according to the ECTS scale do not coincide with the limits of grades "5", "4", "3" according to the traditional scale. Acquirers who have received grades of "FX" and "F" ("2") are not included in the list of ranked acquirers. The grade "FX" is awarded to students who have obtained the minimum number of points for the current learning activity, but who have not passed the final examination. A grade of "F" is assigned to students who have attended all classes in the discipline, but have not achieved a grade point average (3.00) for the current academic activity and are not admitted to the final examination.
Applicants who study in one course (one specialty), based on the number of points scored in the discipline, are ranked on the ECTS scale as follows:

Criteria for determining the ECTS assessment

ECTS' s mark	Statistical indicator
«A»	the best 10% of students
«B»	the next 25% of students

«C»	the next 30% of students
«D»	the next 25% of students
«E»	the next 10% of students

10. Methodological support

- Working program of the academic discipline
- Syllabus
- Methodical developments for practical classes
- Methodical recommendations for independent work of higher education applicants
- Multimedia presentations
- Situational clinical tasks
- Electronic bank of test tasks by

subdivisions of the discipline.Educational and methodical literature:

- Extrapulmonary tuberculosis: N.A. Matsegora, V.G. Marichereda, P.B. Antonenko, O.E. Shpota, I.M. Smolska, A.V. Kaprosh, L.P. Omelyan, A.S. Zaitsev. – Odesa: Oldi+, 2022, – 430 p. ISBN 978-966-289-670-1
- Practical training in phthisiology: study guide / O.K. Asmolov, O. A. Baburina, N. A.Gerasimova. Odesa: ONMedU, 2010. 46 p. (eBook).
- Tuberculosis of bones and joints: method. recommendations for students and doctors of interns of VNMZ IV level of accreditation / N. A. Matsegora, A. Ya. Lekan, L. P. Omelyan [and others]. Odessa: ONMedU, 2018.24 p.

11. Questions for the final control

1. Causative agent of tuberculosis, his kinds, property.
2. Sources of tubercular infection. Ways of penetration of tuberculosis infection in theorganism.3.Structure of tuberculous granuloma.
4. There are groups of the high risk of TB disease
5. There are methods of detection of tuberculosis: FG-examination, tuberculin test,sputumexamination.
6. Clinical and laboratory signs of tuberculosis.
7. Tuberculindiagnostics: Montoux test with 2 TU and estimation of its results. „Virag" oftuberculintests.
8. Prophylaxis of tuberculosis: social, sanitary,specific.9.Primary prophylaxis: BCG vaccinatio
10. Place of tubercular infection. TB prophylaxis at the place of tuberculous infection.11.There are basic principles of treatment of tuberculosis.
12. Primary tuberculosis: clinical forms, general characteristics.
13. Secondary tuberculosis: clinical forms, general characteristics.
14. Tuberculosis of mucous membrane of the oral cavity: forms, diagnostics, doctor's tactic.15.Complication of tuberculosis.

12. Recommended literature

Basic:

1. Extrapulmonary tuberculosis: N.A. Matsegora, V.G. Marichereda, P.B. Antonenko, O.E. Shpota, I.M. Smolska, A.V. Kaprosh, L.P. Omelyan,

A.S. Zaitsev. – Odesa: Oldi+, 2022, – 430 p. ISBN 978-966-289-670-1
2. Practical training in phthisiology: study guide / O.K. Asmolov, O. A. Baburina, N. A. Gerasimova. Odesa: ONMedU, 2010. 46 p. (eBook).
3. Tuberculosis of bones and joints: method. recommendations for students and doctors of interns of VNMZ IV level of accreditation / N. A. Matsegora, A. Ya. Lekan, L. P. Omelyan [and others]. Odessa: ONMedU, 2018.24 p.

Additional:

1. BCG vaccines: WHO position paper. February 2018. URL: https://www.who.int/immunization/policy/position_papers/bcg/en/
2. Latent TB Infection: Updated and consolidated guidelines for programmatic management (WHO/CDS/TB/2018.4). Geneva, World Health Organization. 2018 (http://apps.who.int/ iris/bitstream/handle/10665/260233/9789241550239-eng.pdf)
3. WHO guidelines on tuberculosis infection prevention and control. 2019 URL: https://apps.who.int/iris/bitstream/handle/10665/311259/9789241550512-eng.pdf
4. Guidelines for treatment of drug-susceptible tuberculosis and patient care, WHO. 2017. URL: https://apps.who.int/iris/bitstream/handle/10665/255052/ 9789241550000-eng.pdf
5. Biochemical Value Dynamics in Patients with Multidrug-Resistant Tuberculosis / HIV with CD4 + Lymphocyte Cells below 50 Cells / μCLandits Variability in the Application of Adjuvant Immunoglobulin Therapy / N. A. Matsegora, A.V. Kaprosh, P. B. Antonenko // International Journal of Mycobacteriology. 2019; 8 (4): 374 - 380. (SCOPUS).
6. Extrapulmonary and miliary tuberculosis in patients with TB / HIV coinfection / V. I. Petrenko, M. G. Dolinskaya, A. N. Raznatovska - M. 2015 DKS Center - 112 p. URL: http://tb.ucdc.gov.ua/uploads/files/usaid_170x240_fp_new.pdf
7. Global tuberculosis report 2019 (WHO/CDS/TB/2019.15). Geneva, World Health Organization. 2019 URL: https://apps.who.int/iris/bitstream/handle/10665/329368/ 9789241565714-eng.pdf.
8. Global Laboratory Initiative model TB diagnostic algorithms. 2018. URL:http://www.stoptb.org/wg/gli/assets/documents/GLI_algorithms.pdf
9. Phthisiology: textbook / V.I. Petrenko, L.D. Todoriko, L.A. Hryshchuk, N.A. Matsegora [etc.]; under the editorship V. I. Petrenko. Kyiv: Medicine, 2018. 471 p.

13. Electronic information resources

1. Site of the Public Health Center of the Ministry of Health of Ukraine. URL: http://phc.org.ua/
2. Questions of tuberculosis on the WHO website. URL: http://www.who.int/tb/en/
3. National Tuberculosis Resource Center. URL: http://tb.ucdc.gov.ua/