

**MINISTRY OF HEALTH PROTECTION OF UKRAINE  
ODESSA NATIONAL MEDICAL UNIVERSITY**

**Department of occupational  
pathology and functional  
diagnostics and  
phthisiopulmonology**

**Syllabus of the academic discipline  
"Preventing the development of side effects of anti-tuberculosis  
drugs"**

<b>Scope of the academic discipline</b>	Total number of hours per discipline: 90 hours, 3 credits. Semesters: IX-X, 5th year of study.
<b>Days, time, place conducting training disciplines</b>	According to the schedule of classes. Department of occupational pathology and functional diagnostics and phthisiopulmonology Odesa, str. French boulevard 40. State institution specialized (special) sanatorium "Arkadia" of the Ministry of Health of Ukraine.
<b>Teacher(s)</b>	Matsegora N.A., doctor of medicine, professor of the department. Docent: Ph.D. Spota O.E., Ph.D. Kaprosh A.V. Assistants: Omelyan L.P., Zaitsev A.S.
<b>Contact Information</b>	Help by phone: Shpota Olena Evgenivna, responsible for international work at the department, 0685326315 Zaitsev Andrii Serhiiyovych, 093-144-81-06 E-mail: <a href="mailto:kaftub@onmedu.edu.ua">kaftub@onmedu.edu.ua</a> Face-to-face consultations: from 2:00 p.m. to 5:00 p.m. every Thursday, from 9:00 a.m. to 2:00 p.m. every Saturday Online consultations: from 3:00 p.m. to 4:00 p.m. every Thursday, from 9:00 a.m. to 2:00 p.m. every Saturday. The link to the online consultation is provided to each group during classes separately.

**COMMUNICATION**

Communication with applicants will be conducted in the classroom (face-to-face).

During distance learning, communication is carried out through the Microsoft Teams platform, as well as through e-mail correspondence, Viber messengers (through groups created in Viber for each group, separately through the head of the group).

## **ABSTRACT OF THE EDUCATIONAL DISCIPLINE**

*Subject of discipline study*—characteristic side effects of PTP that may occur when they are used in therapeutic doses; pathogenetic mechanisms of development of side effects; measures that contribute to the reduction or prevention of side effects.

*Prerequisites and post-requisites of the discipline (the place of the discipline in the educational program): Prerequisites:* Ukrainian language (by professional direction), foreign language (by professional direction), Latin language and medical terminology, medical biology, medical and biological physics, biological and bioorganic chemistry, human anatomy, histology, cytology and embryology, physiology, microbiology, virology and immunology; basics of bioethics and biosafety, pathomorphology, pathophysiology, radiology, pharmacology, propaedeutics of internal medicine, propaedeutics of pediatrics, radiology, hygiene and ecology.

*Post-requisites:* internal medicine (pulmonology, endocrinology), surgery, otolaryngology, neurology, infectious diseases, epidemiology, pediatrics, childhood infections, general practice (family medicine).

*Goal:* mastering a set of knowledge, skills, and rational use of anti-tuberculosis drugs that are safe for human health, which should reduce the frequency or prevent the occurrence of unwanted effects when making a rational choice of drugs.

### ***Task:***

- 1) To acquire knowledge about the source of tuberculosis infection.
- 2) To acquire skills and abilities to determine the clinical criteria of TB cases.
- 3) Master the knowledge and ability to implement the algorithm of actions of specialists of institutions/services within the framework of epidemiological surveillance of TB.
- 4) To master the procedure for carrying out epidemiologic surveillance of contacts with a case of TB.
- 5) Master preventive measures in the focus of tuberculosis infection.
- 6) Master the quality standards of epidemiological surveillance of TB.

### *Expected results:*

**As a result of studying the academic discipline, the student of higher education should: Know:**

- 1) diagnosis and differential diagnosis of tuberculosis;
- 2) the concept of the focus of tuberculosis infection. Categories of centers according to the degree of epidemic danger;
- 3) infection control: administrative, engineering, individual protection;
- 4) primary prevention (BCG vaccination);
- 5) secondary prevention (chemoprophylaxis) of tuberculosis, indications, methods of implementation;
- 6) sanitary and sanitary-educational prevention, their tasks;
- 7) measures to prevent tuberculosis among persons working in anti-tuberculosis institutions;
- 8) how to prevent infection of people from animals with tuberculosis;
- 9) preventive measures at the inpatient and outpatient stages of TB treatment and categories of dispensary records.

**Be able:**

- 1) to diagnose various clinical forms of tuberculosis;
- 2) to characterize the center of tuberculosis infection according to the degree of epidemic danger; to determine the ways of TB infection;
- 3) formulate the basic principles of infection control;
- 4) to demonstrate knowledge and order carrying out primary (BCG vaccination) prevention of tuberculosis;
- 5) determine the knowledge and procedure for secondary prevention of tuberculosis (chemoprophylaxis);
- 6) formulate preventive measures for sanitary and sanitary-educational prevention, their tasks;
- 7) register tuberculosis cases;
- 8) demonstrate the formation of moral and ethical and deontological qualities during professional communication with the patient, as well as the principles of professional subordination in phthisiology.

## **DESCRIPTION OF THE EDUCATIONAL DISCIPLINE**

***Forms and methods of education***

The discipline will be taught in the form of seminar classes (30 hours), organization of students' independent work (60 hours).

***Teaching methods:***

*Seminar classes* reveal the problematic issues of the relevant sections of the discipline. They can be held in the following forms: seminar-lecture, seminar-discussion, seminar-round table, seminar-consultation, seminar-practical class (using oral and written survey, solving test tasks, solving situational problems).

*Independent work of applicants (SRZ) with active consultation of the teacher* (during independent work, applicants master the educational material of the next practical session. At consultations, the applicant can

get answers to difficult questions of the topic).

*Content of the academic discipline*

Topic 1. Organization of medical care for tuberculosis patients. Detection and diagnosis of tuberculosis. Categories of tuberculosis patients referred for treatment and dispensary supervision.

Topic 2. General principles of antimycobacterial therapy. Antimycobacterial drugs. Standard regimen of therapy for patients of 1, 2, 3, 4 categories.

Topic 3. Antituberculosis drugs of the first series. Isoniazid (H); Rifampicin (R); Ethambutol (E); Pyrazinamide (Z).

Topic 4. Antituberculosis drugs of the 2nd line.

Topic 5. Classification of adverse reactions (AD): according to the mechanism of development (A, B, C, D.); by degree of difficulty. Clinical manifestations of side effects of antituberculosis drugs on the side of the central nervous system and peripheral nervous system: symptoms, characteristics, assistance.

Topic 6. Clinical manifestations of side effects of anti-tuberculosis drugs: symptoms, characteristics, assistance.

Topic 7. Clinical manifestations side actions anti-tuberculosis drugs:symptoms, characteristics, assistance.

Topic 8. Clinical manifestations side actions anti-tuberculosis drugs:symptoms, characteristics, assistance.

Topic 9. Clinical manifestations of side effects of antituberculosis drugs of allergic and non-allergic origin: symptoms, characteristics, assistance.

Topic 10. Antituberculosis drugs for use in special cases: Topic 11. Toxic and toxic-allergic side reactions to antituberculosis drugs.

Topic 12. Acquaintance with the latest advances in pharmacotherapy of resistant forms of tuberculosis. Basic principles of treatment of patients with multidrug-resistant tuberculosis and tuberculosis with extended resistance and construction of a chemotherapy regimen.

Topic 13. Pathogenetic and symptomatic therapy of tuberculosis.

Topic 14. Control, monitoring and management of adverse reactions to anti-tuberculosis drugs.

**LIST OF RECOMMENDED LITERATURE:**

**Main:**

1. Phthisiatry: a textbook / V. I. Petrenko, L. D. Todoriko, L. A. Hryshchuk [and others] ; under the editorship of V. I. Petrenko. Kyiv: Medicine, 2018. 471 p.
2. Current issues of phthisiology: manual / D. G. Kryzhanoskyi, V. A. Freiwald,

- N. A. Marchenko (and others). Dnipropetrovsk: T. K. Serednyak, 2017. 155 p.
3. Management of adverse reactions during the treatment of patients with tuberculosis and co-infection (tuberculosis/HIV infection/AIDS) (methodological manual for doctors) "National Institute of Phthisiatry and Pulmonology named after F.G. Yanovsky National Academy of Sciences of Ukraine". Kyiv, 2016. 80 p.

**Additional:**

1. Emergencies in the practice of a phthisiopulmonologist: teaching. manual / N. A. Matsegora, O. Ya. Lekan, O. A. Baburina, M. Yu. Golubenko. Odesa: "Astroprint", 2016. 64 p.
2. Prevention of tuberculosis. Study guide for students and interns of VNMZ IV accreditation level and doctors / V. I. Petrenko, M. G. Dolynska, A. V. Aleksandrin, V. V. Petrenko. Kyiv: 2 Print, 2017. 88 p. url:<http://tb.ucdc.gov.ua/uploads/files/prophilaktica.pdf>.
3. Tuberculosis of bones and joints: method. recommendations for students and interns of IV level VNMZ accreditation / N. A. Matsegora, O. Ya. Lekan, L. P. Omelyan [and others]. Odesa: ONMedU, 2018. 24 p.
4. Extrapulmonary and miliary tuberculosis in patients with TB/HIV co-infection / V. I. Petrenko, M. G. Dolynska, O. M. Raznatovska. K. 2015: DKS Center. 112 with. URL: [http://tb.ucdc.gov.ua/uploads/files/usaid\\_170x240\\_fp\\_new.pdf](http://tb.ucdc.gov.ua/uploads/files/usaid_170x240_fp_new.pdf)
5. Duzhiy I. D. Bone tuberculosis is the cause of other forms of tuberculosis/ Duzhiy I. D., Bondarenko L. A., Oleshchenko V. O. // Tuberculosis. Lung diseases, HIV infection. 2016. No. 4. 65 - 67 p.
6. Yu.I. Feshchenko , Ilnytskyi I.H. Tuberculosis of extrapulmonary localization. Kyiv, 2016. 378p.
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. Order of the Ministry of Health of Ukraine No. 530 dated February 25, 2020 "Health care standards at tuberculosis". URL:[https://phc.org.ua/sites/default/files/users/user90/Nakaz\\_MOZ\\_vid\\_25.02.2020\\_0\\_530\\_Standarty\\_medopomogy\\_pry\\_TB.pdf](https://phc.org.ua/sites/default/files/users/user90/Nakaz_MOZ_vid_25.02.2020_0_530_Standarty_medopomogy_pry_TB.pdf)
9. TUBERCULOSIS Clinical attitude Ministry of Health of Ukraine, founded onevidentiary data  
  
No KN 2021-530 from 11/17/2021. URL:  
<https://www.dec.gov.ua/mtd/tuberkuloz/>
10. Order of the Ministry of Health of Ukraine No. 287 dated February 1, 2019 "On the approval of the Infection Control Standard for health care institutions that provide assistance to tuberculosis patientsvine". URL:<https://zakon.rada.gov.ua/laws/show/z0408-19#Text>

## EVALUATION

### Current control methods:

*The following methods of current control are used at each seminar session:*

- 1) Oral answer to standardized questions on the material of the current topic.
- 2) Solving situational problems.
- 3) Solving test tasks by topic.

### Criteria for current assessment in class:

"5 »	Student free owns material, accepts active participation in discussed and solutions situational clinical tasks, confidently demonstrates practical skills under time review sick child and interpretations data 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, participates in the discussion and solving a situational clinical problem, demonstrates practical skills under time review sick child and interpretations data 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, is unsure about participating in discussed and solutions situational clinical tasks, demonstrates practical skills during examination of a sick child and data interpretation clinical, laboratory and instrumental studies with significant errors.
"2 »	The student does not have the material, does not take part in the discussion and solutions situational clinical tasks, not demonstrates practical skills undertime review sick child and interpretations data clinical, laboratory and instrumental of research

*Forms and methods of final control:* Credit is awarded to an applicant who has completed all sections of the educational program of the elective discipline, has actively participated in seminars, has a current grade point average of at least 3.0, and has no academic debt.

*The possibility and conditions of obtaining additional (bonus) points:* not provided.

## INDEPENDENT WORK OF HIGHER EDUCATION ACQUIRES

Independent work involves preparation for each practical session.

### EDUCATIONAL DISCIPLINE POLICY

#### *Deadlines and Rescheduling Policy:*

- Absences of classes for non-respectable reasons are worked up according to the schedule of the teacher on duty.
- Absences due to valid reasons are worked out according to an individual schedule with the permission of the dean's office.

#### *Academic Integrity Policy:*

Applicants must observe academic integrity, namely:

- independent performance of all types of work, tasks, forms of control provided for by the work program of this educational discipline;
- references to sources of information in the case of using ideas, developments, statements, information;
- compliance with the legislation on copyright and related rights;
- provision of reliable information about the results of one's own educational (scientific) activity, used research methods and sources of information.

Unacceptable in educational activities for participants of the educational process are:

- the use of family or official ties to obtain a positive or higher grade during any form of control of academic performance or academic merit;
- use of prohibited auxiliary materials or technical means (cheat sheets, notes, micro-earphones, telephones, smartphones, tablets, etc.) during control measures;
- going through procedures for monitoring the results of training by fake persons.

For violation of academic integrity, students may be held to the following academic responsibility:

- a decrease in the results of assessment of the control work, assessment in class, credit, etc.;
- retaking the assessment (test, credit, etc.);
- assignment of additional control measures (additional individual tasks, control works, tests, etc.);
- conducting an additional inspection of other works authored by the violator.

#### *Attendance and Tardiness Policy:*

Uniform: a medical gown, which completely covers the outer clothing, or medical pajamas, a cap, a mask, changeable shoes.

Equipment: notebook, pen, phonendoscope.

State of health: applicants suffering from acute infectious diseases, including respiratory diseases, are not allowed to attend classes.

A student who is late for class can attend it,  
but if the teacher put "nb" in the journal, he must work it out

general order.

*Use of mobile devices:*

Mobile devices can be used by students with the teacher's permission if they are needed to complete the task.

*Behavior in the audience:*

The behavior of applicants and teachers in the classrooms should be working and calm, strictly comply with the rules established Provisions on academic integrity and ethics of academic relations in Odesa National Medical University, in accordance with Code of academic ethics and university relations community Odessa National Medical University, Provisions on prevention and detection of academic plagiarism in research and educational work of university graduates of education, scientists and teachers of Odesa National Medical University.