INTERNATIONAL HIGHER SCHOOL OF MEDICINE

INTERNAL MEDICINE DEPARTMENT

SYLLABUS

Professional diseases

2026-2027 academic year

for students of medical faculty

4 course 8 semester, 1-9 groups

2 credits (60 h, including auditorial 36 h, independent work – 24 h)

Lecturer:	**Leonteva Natalia** Phone: +996 551535251 (Whatsapp). Email: leo.nata.med@gmail.com
Venue:	Zoom
Practical classes:	**Leonteva Natalia** Phone: +996 551535251 (Whatsapp). Email: leo.nata.med@gmail.com **Moldoeva Salamat** Phone: +996 504757757 Email: s.moldoeva@gmail.com **Maksutali uluu Kylych** Phone: +996 777173495 phone (Whatsapp) Email: kygo.1510@gmail.com
Venue:	Oncology center, rail hospital, №2 hospital

The Syllabus is considered
at the meeting of the department of internal medicine
Protocol № 1 dated 28.08.2026
Head of the department prof. Kudaibergenova N.T.



Course Objective: Mastering the knowledge of diseases of occupational etiology, as well as the principles of diagnosis, skills and abilities in the treatment and prevention of occupational diseases

After study of the discipline the student must:

Knowledge:

- The main harmful factors of the working environment and determine the degree of their potential danger for the development of occupational diseases.
- Main tasks, activities and duties of a occupational pathologist
- Clinical manifestations of the main forms of occupational diseases provided for by the program, get acquainted with their various manifestations, including atypical variants of the course of diseases.
- Methods of individualization of the diagnosis and differentiated therapy
- Methods for assessing emergency conditions, their treatment and prevention.
- Issues of examination of working capacity in case of occupational diseases
- **Skills:**
- To analyze and use data on sanitary and hygienic working conditions at the workplace to justify the relationship of the disease with the working conditions of the patient
- Be able to conduct a targeted examination of workers in industrial enterprises, agriculture, transport and construction to identify their occupational disease
- To be able to formulate a diagnosis of an occupational disease, taking into account its form, the main clinical symptoms and syndromes, the degree of dysfunction of the affected organs, the severity of the course of the pathological process
- To be able to prescribe a rational, pathogenetically substantiated therapy for patients with occupational diseases
- Be able to provide emergency medical care for acute intoxication and emergency conditions.
- Be able to solve issues of rehabilitation, prevention, disability and employment of the patient

Attitude:

- Methods for stratification of risk factors for the development of infectious and non-infectious occupational diseases.
- Skills for a reasoned justification of the clinical diagnosis of an occupational disease.
- The skills of choosing high-quality sources of scientific and medical information on the subject of the study.

Pre-requisites.

- Anatomy (macro - micro anatomy)
- General pathology
-Normal physiology
- Basic and clinical pharmacology
- Propedtherapy
-Internal medicine

Post-requisites.

-Polyclinic therapy
- Medical control
-Family medicine
- Anesthesiology, Intensive Care, Emergency Conditions

THEMATIC PLAN OF LECTURES

№	Theme of lecture	Hours	Date
1	Introduction to the Clinical Practice of Occupational Diseases and Objectives	2	09.2026-05.2027
2	Occupational Diseases of Dust Etiology. Pneumoconiosis. Silicosis. Asbestosis. Anthracosis	2	09.2026-05.2027
3	Dust Bronchitis. Occupational Bronchial Asthma	2	09.2026-05.2027
4	Vibration disease	2	09.2026-05.2027
5	Occupational Poisoning with Heavy Metal Salts. Occupational Poisoning with Aromatic Hydrocarbons	2	09.2026-05.2027
6	Diagnostic Features, Organization, and Main Types of Emergency Medical Care for Acute Occupational Intoxications	2	09.2026-05.2027

THEMATIC PLAN OF PRACTICAL CLASSES

№	Theme of practical class	Hours	Date
1	Features of the care and examination of patients with occupational diseases	2	09.2026-05.2027
2	Diagnosis and treatment of patients with silicosis with case studies	2	09.2026-05.2027

3	Diagnosis and treatment of patients with berylliosis with case studies	2	09.2026-05.2027
4	Diagnosis and treatment of patients with asbestosis and anthracosis with case studies	2	09.2026-05.2027
5	Diagnosis and treatment of patients with dust bronchitis and occupational bronchial asthma with patient demonstration	2	09.2026-05.2027
6	Module 1	2	09.2026-05.2027
7	Diagnosis and treatment of patients with vibration syndrome with case studies	2	09.2026-05.2027
8	Intoxication with heavy metals (mercury, antimony), lead, and its inorganic compounds with case studies	2	09.2026-05.2027
9	Intoxication with aromatic hydrocarbons Analysis of case studies	2	09.2026-05.2027
10	Intoxication with pesticides used in agriculture, with analysis of case studies	2	09.2026-05.2027
11	Respiratory damage due to toxic chemical etiology. Diagnostic features, organization, and main types of emergency medical care for acute occupational intoxications, with analysis of case studies	2	09.2026-05.2027
12	Module 2	2	09.2026-05.2027

THEMATIC PLAN OF INDEPENDENT WORK OF STUDENTS

Unit №	Theme of independent work	Hours	Date
1	Siderosis. Alluminiosis	3	09.2026-05.2027
2	Bycinnosis	3	09.2026-05.2027
3	Respiratory failure. Cor pulmonale, right heart failure	3	09.2026-05.2027
4	Complications of vibrational disease	3	09.2026-05.2027
5	Mercury intoxication	3	09.2026-05.2027
6	Copper intoxication	3	09.2026-05.2027
7	Antimony intoxication	3	09.2026-05.2027
8	Intoxication with arsenic-containing pesticides	3	09.2026-05.2027
	Total	**24**	

Recommended reading for the discipline:

Basic:

№	Authors	Title	The year of publishing	Availability in the IHSM library (number of)
1	Harrison Liu KD, Chertow GM.	Principles of Internal Medicine	2001 2005	3
2	Davidson	Priciples and Practice of Medicine	2006	2

Additional:

№	Authors	Title	The year of publishing	Availability in the IHSM library (number of)
1	Sharma, Sat.	Hypersensitivity Pneumonitis.	2006	https://emedicine.medscape.com/article/299174-overview
2		"Respiratory Diseases:	2012	https://www.cdc.gov/niosh/

		Occupational Risks"..		programs/resp/risks.html

Grading policy and procedures for all types of work
For the period of studying the discipline, the student gains points for the relevant parameters (per unit):
current score - 40 points
independent work - 20 points
control score (final assessment of knowledge per unit) - 40 points
Maximum score - 100 (40+20+40)

Grading system for student's achievements

Grading criteria per discipline				
Maximum score	Intervals			
	«unsatisfactory»	«satisfactory»	«good»	«excellent»
Current control - 40	0-23	24-30	31-35	36-40
Interval description	Taking into account attendance and grades for each lesson, calculate the average arithmetic score			
Independent work - 20	0-11	12-14	15-17	18-20
Interval description	the work is not done, or it is done incorrectly	Not completed in full	Completed in full with comments	Completed in full without any comments
Control work (module) - 40	0-23	24-30	31-35	36-40
Interval description	Completed less than 50% of the tasks	Completed 50-70% of the tasks	Completed 70-90% of assignments with comments	Completed the assignments in full (90-100% of tasks) without any comments

Conduct Policy: (lateness, absence, behavior in the auditorium, late submission of work).
- Punctuality and completion of tasks.
- Mandatory attendance of classes.
- Attending class in a clean medical uniform.
- Eliminating conversations on a cell phone in the classroom.
- Active participation in the learning process.
- Doing homework on time.
- Academic detention at the time specified by the teacher.

For violations of the Conduct Policy, the total points for discipline might be reduced to 1-10 points.

Academic Ethics Policy.
- Be tolerant, respect the opinions of others.
- Formulate objections in the correct form.
- Constructively support feedback in all classes.
- Plagiarism and other forms of dishonest work are unacceptable. Plagiarism includes the following: the absence of references when using printed and electronic materials, quotes, thoughts and works of other authors or students.
- Prompting and cheating during tests, exams, classes is unacceptable as well as passing an exam for another student, unauthorized copying of materials.

For violations of the Academic Ethics Policy, the total points for the discipline may be reduced to 1-10 points.

Guidelines for the lessons of the discipline

Key questions covered in lesson 1.

1. Occupational diseases. Definition. Etiology. Epidemiology. Classification. Diagnostics. Treatment. Prevention. Prognosis. Examination of incapacity for work

Recommended reading for the lesson/unit:

1. Harrison's Principles of Internal Medicine. 20th ed. New York, NY: McGraw-Hill; 2018.
2. Davidson's Principles of Internal Medicine. 23th ed. Elsevier; 2018.

Key questions covered in lesson 2

1. Silicosis. Definition. Etiology. Epidemiology. Classification. Clinical feature. Complications. Diagnostics. Treatment. Prevention. Prognosis

Recommended reading for the lesson/unit:

1. Harrison's Principles of Internal Medicine. 20th ed. New York, NY: McGraw-Hill; 2018.
2. Davidson's Principles of Internal Medicine. 23th ed. Elsevier; 2018.

Key questions covered in lesson 3

1. Berylliosis. Definition. Etiology. Epidemiology. Classification. Clinical feature. Complications. Diagnostics. Treatment. Prevention. Prognosis

Recommended reading for the lesson/unit:

1. Harrison's Principles of Internal Medicine. 20th ed. New York, NY: McGraw-Hill; 2018.
2. Davidson's Principles of Internal Medicine. 23th ed. Elsevier; 2018.

Key questions covered in lesson 4

1.Asbestosis. Definition. Etiology. Epidemiology. Classification. Clinical feature. Complications. Diagnostics. Treatment. Prevention. Prognosis

2.Anthracosis (coal worker's disease). Definition. Etiology. Epidemiology. Classification. Clinical feature. Complications. Diagnostics. Treatment. Prevention. Prognosis

Recommended reading for the lesson/unit:

1. Harrison's Principles of Internal Medicine. 20th ed. New York, NY: McGraw-Hill; 2018.
2. Davidson's Principles of Internal Medicine. 23th ed. Elsevier; 2018.

Key questions covered in lesson 5.

1. Professional bronchitis. Definition. Etiology. Epidemiology. Classification. Clinical feature. Complications. Diagnostics. Treatment. Prevention. Prognosis

2. Occupational bronchial asthma. Definition. Etiology. Epidemiology. Classification. Clinical feature. Complications. Diagnostics. Treatment. Prevention. Prognosis

Recommended reading for the lesson/unit:

1. Harrison's Principles of Internal Medicine. 20th ed. New York, NY: McGraw-Hill; 2018.
2. Davidson's Principles of Internal Medicine. 23th ed. Elsevier; 2018.

Key questions covered in lesson 7.

Vibration disease. Definition. Etiology. Epidemiology. Classification. Clinical feature. Complications. Diagnostics. Treatment. Prevention. Prognosis

Recommended reading for the lesson/unit:

1. Harrison's Principles of Internal Medicine. 20th ed. New York, NY: McGraw-Hill; 2018.
2. Davidson's Principles of Internal Medicine. 23th ed. Elsevier; 2018.

Key questions covered in lesson 8.

1. Intoxication with heavy metals (mercury, antimony), lead, and its inorganic compounds with case studies

Recommended reading for the lesson/unit:

1. Harrison's Principles of Internal Medicine. 20th ed. New York, NY: McGraw-Hill; 2018.
2. Davidson's Principles of Internal Medicine. 23th ed. Elsevier; 2018.

Key questions covered in lesson 9.

Intoxication with aromatic hydrocarbons. Definition. Etiology. Epidemiology. Classification. Clinical feature. Complications. Diagnostics. Treatment. Prevention. Prognosis

Recommended reading for the lesson/unit:

1. Harrison's Principles of Internal Medicine. 20th ed. New York, NY: McGraw-Hill; 2018.
2. Davidson's Principles of Internal Medicine. 23th ed. Elsevier; 2018.

Key questions covered in lesson 10.

Conditions under which occupational intoxication is possible. Classification of toxic substances by their predominant effect on the body Occupational diseases with predominant damage to the respiratory system. The main clinical syndromes in acute poisoning. The main clinical syndromes in chronic damage to the respiratory system

with irritating substances. Diagnostics. Treatment. Prevention Examination of disability
Recommended reading for the lesson/unit:
1. Harrison's Principles of Internal Medicine. 20th ed. New York, NY: McGraw-Hill; 2018.
2. Davidson's Principles of Internal Medicine. 23th ed. Elsevier; 2018.

Key questions covered in lesson 11.
Acute occupational intoxication. Definition. Etiology. Classification. Clinical feature. Complications. Diagnostics. Principles of emergency care. Prevention. Prognosis
Recommended reading for the lesson/unit:
1. Harrison's Principles of Internal Medicine. 20th ed. New York, NY: McGraw-Hill; 2018.
2. Davidson's Principles of Internal Medicine. 23th ed. Elsevier; 2018.

Methodological instructions for the implementation of independent work on the discipline
1. Siderosis. Alluminiosis (abstract, control questions)
2. Bycinnosis (presentation, control questions)
3. Respiratory failure (abstract, table - differential diagnosis)
4. Complications of vibrational disease (abstract, control questions)
5. Mercury intoxication (presentation, control questions)
6. Copper intoxication (presentation, control questions)
7. Antimony intoxication (presentation, control questions)
8. Intoxication with arsenic-containing pesticides (presentation, control questions)