FEDERAL STATE BUDGETARY
EDUCATIONAL INSTITUTION OF HIGHER EDUCATION
«AMUR STATE MEDICAL ACADEMY»
MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

AGREED
Vice-Rector for Academic Affairs

_____ N.V. Loskutova

April 17, 2025

Decision of the CCMC
April 17, 2025

Protocol No. 7

APPROVED
by decision of the Academic Council of the FSBEI HE Amur SMA of the Ministry of Health of the Russian Federation

April 22, 2025

Protocol No. 15

Acting Rector of the FSBEI HE
Amur SMA of the Ministry
of Health of the Russian Federation

_____ I.V. Zhukovets

April 22, 2025

ДОКУМЕНТ ПОДПИСАН
ЭЛЕКТРОННОЙ ПОДПИСЬЮ

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EDUCATIONAL PROGRAM
discipline «Occupational Diseases»

Specialty: 31.05.01 General Medicine
Course: 4
Semester: 7
Total hours: 72 hours
Total credits: 2 credit units
Lectures: 14 hours
Practical classes: 34 hours
Self-sustained work of students: 24 hours
Control form: credit-test

Blagoveshchensk, 2025

The educational program for the discipline «Occupational Diseases» is designed in accordance with the Federal State Educational Standard of Higher Education in the specialty 31.05.01 General Medicine (specialty level), approved by the order of the Ministry of Education and Science of Russia dated 08.12.2020 No. 988 (registered with the Ministry of Justice of Russia on 08.26.2020 No. 59493), BPEP HE (2021).

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Conclusion of the Expert Commission on the review of the Educational Programs: Protocol No. 1 dated April 16, 2025

Expert of the expert commission,
Holder of the Advanced Doctorate in medical Sciences,
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Approved at the meeting of the CMC no. 3, protocol no. 6 dated April 17, 2025

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AGREED:
Dean of the Faculty of Medicine, Associate Professor, Ph.D. of Medical Sciences
_____ N.G. Brush

April 17, 2025

CONTENTS OF THE WORK PROGRAM

1	Explanatory note	**4**
1.1.	Characteristics of the discipline	**4**
1.2.	The purpose and objectives of the discipline, its place in the structure of the main professional educational program of higher education	**4**
1.3.	The place of the discipline in the structure of the main professional educational program of higher education	**5**
1.4.	Requirements for students	**5**
1.5	Interdisciplinary links with subsequent disciplines.	**11**
1.6	Requirements for the results of mastering the discipline	**12**
1.7	Stages of developing competence and descriptions of assessment scales.	**22**
1.8	Forms of organizing training and types of control.	**23**
2	Structure and content of the discipline	**25**
2.1	Scope of the discipline and types of educational activities	**25**
2.2	Thematic plan of lectures and their brief content	**26**
2.3	Thematic plan of clinical practical classes and their content	**28**
2.4	Interactive forms of training	**33**
2.5	Criteria for assessing students' knowledge.	**34**
2.6	Independent work of students: in-class, out-of-class.	**38**
2.7	Research (project) work of students	**41**
3	Educational and methodological, material and technical and informational	**41**
3.1		**41**
3.2	support of the discipline:	**42**
3.3	Main literature	**42**
3.4	Additional literature	**43**
3.5	Educational and methodological support of the discipline, prepared	**44**
3.6		**46**
3.7	by the department staff	**47**
4	Equipment used for the educational process.	**48**
4.1	Professional databases, information and reference systems, electronic educational resources.	**48**
4.2	Licensed and freely distributed software used in the educational process.	**50**
4.3	Resources of the information and telecommunications network "Internet"	**55**
4.4	Fund of assessment tools	**56**

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1. EXPLANATORY NOTE

1.1. Characteristics of the discipline

The results of numerous epidemiological studies in healthcare indicate the widespread and constant growth of diseases from occupational factors among the working population, which is the most important medical and social problem of our time, and is associated with both high levels of morbidity and mortality.

The growing prevalence of occupational diseases, the tendency to more frequent severe clinical forms put the relevance of the discipline in question at one of the leading places in modern clinical medicine. The progress achieved over the last decade in the study of the immune, genetic and biochemical bases of occupational diseases contributes to the development and implementation of new diagnostic methods, which creates a real basis for early detection and timely adequate treatment and rehabilitation of patients and serves as the basis for developing prevention of occupational diseases using a rapidly expanding arsenal of drugs. Doctors of various specialties have to solve issues of the influence of production factors on the health of workers and establishing a connection between the disease and the profession.

The working program of the discipline "Occupational diseases" is aimed at an in-depth study of the main diseases in professional activities (their etiology, pathogenesis, clinical and differential diagnostic criteria, modern methods of diagnosis, treatment and prevention). When studying this discipline, it is envisaged to develop students' professional skills through a complete clinical examination of patients, conducting differential diagnostics, which contributes to establishing a clinical diagnosis and developing a plan for treatment, rehabilitation and preventive measures. When presenting the lecture course of the discipline, the connection between

topics and sections of the program, while ensuring the perception of the discipline as a single, integral science.

Classes on the subject “Occupational diseases” are held in the 7th semester: 10 clinical practical classes (34 hours) and 7 lectures (14 hours).

Classes on the subject "Occupational diseases" are conducted in accordance with the curriculum in classrooms, wards of the pulmonology and therapeutic profile of hospital departments.

1.2. The purpose and objectives of the discipline

The purpose of mastering the discipline is to deepen basic knowledge and form systemic knowledge about the main occupational diseases, the ability to generalize and apply the acquired knowledge in practical activities, taking into account modern principles of diagnosis, treatment and prevention.

Learning objectives of the discipline:

1. correctly analyze and systematize clinical and anamnestic data, results of physical examination of a patient with major occupational diseases;

2. timely diagnosis of early manifestations of occupational diseases; 3. differential diagnosis of the main nosological forms in

occupational pathology;

4. correctly interpret the data of additional examination methods;
5. work with medical documentation in a hospital setting;
6. develop independent clinical thinking, formulate a detailed clinical diagnosis in accordance with modern classifications;
7. teach the basic principles of treatment, prevention, preliminary and periodic examinations of workers exposed to adverse production factors, assessment of work capacity and rehabilitation of patients with occupational diseases.

8. Teach the basic principles of providing emergency care in urgent conditions within the studied nosological forms.

1.3. The place of the discipline in the structure of the main professional educational program of higher education

In accordance with the Federal State Educational Standard of Higher Education in the specialty 31.05.01 General Medicine (2020), the discipline "Occupational Diseases" refers to the basic part, Block 1. The total workload is 2 credits (72 hours), taught in the 7th semester in the 4th year. The form of control is a credit in the 7th semester.

The discipline "Occupational diseases" includes the following sections:

1. General principles of diagnostics, treatment, prevention of occupational diseases. Medical and social expertise; occupational diseases caused by dust factors (dust bronchitis, pneumoconiosis).

2. Occupational diseases caused by physical and chemical factors (vibration disease, poisoning with aromatic hydrocarbons, lead, inorganic mercury, pesticides).

1.4 Requirements for students

To study the discipline, knowledge, skills and abilities formed by previous disciplines are necessary:
Latin
Knowledge: basic medical and pharmaceutical terminology in Latin.
Skills: be able to apply knowledge for communication and obtaining information from medical literature, medical documentation.
Skills: applies medical and pharmaceutical terminology in Latin in professional activities
Professional foreign language
Knowledge: basic medical and pharmaceutical terminology in a foreign language language.
Skills: apply knowledge to communication and obtaining information from foreign countries sources.
Skills: applies medical and pharmaceutical terminology in a foreign language in professional activities
History of Medicine
Knowledge: outstanding figures in medicine and healthcare, Nobel laureates, outstanding medical discoveries in the field of therapy, the influence of humanistic ideas on medicine.
Skills: to competently and independently present and analyze the contribution of domestic

scientists in the development of occupational diseases.
Skills: Retrospective assessment of skills and treatment methods across different historical stages of the development of medicine
Philosophy
Knowledge: methods and techniques of philosophical analysis of problems; forms and methods of scientific knowledge, their evolution; basic patterns and trends in the development of the world historical process; laws of dialectical materialism in medicine.
Skills: to competently and independently express, analyze the forms and methods of scientific knowledge and the laws of dialectical materialism in medicine.
Skills: have the skills to prepare an academic research paper; have the skills to present an independent point of view, analyze and think logically, speak publicly, conduct discussions and round tables; have the skills to creatively analyze non-standard situations; have the skills to form and implement ethical principles in professional activities.
Bioethics
Knowledge: moral and ethical standards, rules and professional medical copnridnuccipt,lerisghts of the patient and the doctor, basic ethical documents regulating the activities of the doctor.
Skills: build and maintain working relationships with patients, others members of the team.
Skills: possess the skills of presenting an independent point of view, analysis and logical thinking, public speaking, moral and ethical argumentation, conducting discussions and round tables, principles of medical deontology and medical ethics; skills of informing patients and their relatives in accordance with the requirements rules of "information consent".
Histology
Knowledge: embryogenesis, histological structure of tissues and systems. **Skills:**
determine age-related patterns of development of organs and systems, analyze the results of histophysiological research.
Skills: skills in microscopy and analysis of histological preparations and electron micrographs.
Microbiology, virology
Knowledge: the impact of microbes, viruses, rickettsia, and fungi on the body. Microbiological diagnostics of infectious diseases.
Skills: analyze the results of microbiological diagnostics of infectious diseases.
Skills: skills of microscopy and analysis of histological preparations and electron micrographs; skills of bacterioscopic, bacteriological, virological, serological analysis.
Physics, Mathematics. Medical informatics
Knowledge: mathematical methods for solving intellectual problems and their application in medicine; theoretical foundations of computer science, collection, storage, search, processing, transformation, distribution of information in medical and biological systems, use of information computer systems in medicine and healthcare; principles of operation and design of equipment used in medicine, the basics of physical and mathematical laws that are reflected in medicine.
Skills: use educational, scientific, popular science literature, the Internet for professional activities, work with equipment taking into account safety regulations.
Skills: basic information transformation technologies: text, spreadsheet editors, Internet search.

Chemistry. Bioinorganic and biophysical chemistry in medicine
Knowledge: the chemical and biological essence of processes occurring in a living organism at the molecular and cellular levels.
Skills: analyze the contribution of chemical processes to the functioning of the cardiovascular, respiratory, digestive, urinary, and hematopoietic systems.
Skills: possess the skills of independent work with educational, scientific and reference literature; skills of safe work in a chemical laboratory - the ability to handle chemical glassware, reagents, gas burners and electrical devices; skills of setting up high-quality reactions for the main functional groups of different classes of organic compounds; skills in using theoretical knowledge of chemistry when studying subsequent disciplines in the medical and biological profile.
Biochemistry. Bioinorganic and biophysical chemistry in medicine
Knowledge: blood composition, biochemical blood constants, hormones, buffer systems, hemoglobin oxygenation factors, erythrocyte metabolism.
Skills: analyze the contribution of biochemical processes to the functioning of organs and the cardiovascular, respiratory, digestive, urinary, and hematopoietic systems; interpret the results of the most common laboratory diagnostic methods to identify disorders in diseases of internal organs and occupational diseases.
Skills: possess theoretical concepts of organic chemistry, knowledge of the composition, structure and properties of organic substances - representatives of the main classes of organic compounds; skills in safe work with chemical glassware and organic substances, laboratory experiment techniques organic synthesis; possess the skills to apply in professional activities.
Biology
Knowledge: laws of genetics and its importance for medicine; patterns of heredity and variability in individual development as the basis for understanding the pathogenesis and etiology of hereditary and multifactorial diseases; biosphere and ecology, the phenomenon of parasitism and bioecological diseases.
Skills: analyze patterns of heredity and variability in the development of diseases of internal organs and occupational diseases.
Skills: to have skills in a set of measures aimed at maintaining and strengthening public health, including the formation of a healthy lifestyle, prevention of the occurrence and (or) spread of diseases, their early diagnosis, identification of the causes and conditions of their occurrence and development, as well as aimed at eliminating the harmful effects of environmental factors on health; readiness to collect and analyze complaints of a patient with hereditary, parasitic diseases, data from his anamnesis, results of examination, laboratory, instrumental, pathological and other studies in order to recognize the cause, condition or establish the fact of the presence or absence of a disease; readiness for educational activities to eliminate risk factors and develop healthy lifestyle skills.
Anatomy
Knowledge: anatomical and physiological features of the respiratory, cardiovascular, digestive, and hematopoietic systems.
Skills: analyze age- and sex-related features of the structure of organs and systems.
Skills: knowledge of basic anatomical terms, medical anatomical conceptual apparatus; knowledge of the anatomy and topography of organs, systems and apparatuses of organs, details of their structure and basic functions; the ability to clearly navigate the complex structure of the human body, accurately and precisely find and determine places

the location and projection of organs and their parts on the surface of the body for understanding pathology, diagnostics and treatment; possess the ability and readiness to analyze the patterns of functioning of individual organs and systems, use knowledge of the anatomical and physiological foundations, basic methods of clinical and immunological examination and assessment of the functional state of the body of an adult and adolescent for the timely diagnosis of diseases and pathological processes.
Normal Physiology
Knowledge: reflex arc, conditioned and unconditioned reflexes, physiology of the cardiovascular, digestive, urinary, respiratory and hematopoietic systems in the norm.
Skills: analyze the importance of regulation of biological processes in the body, functioning of the cardiovascular, digestive, human on urinary, respiratory, hematopoietic systems.
Skills: skills in organizing experimental planning, methods; skills in interpreting the results obtained and formulating conclusions; methods for assessing the main morpho-functional indicators of an adult and a child, methods that allow establishing existing violations of growth and development processes.
Life safety, disaster medicine
Knowledge: acute and chronic diseases from exposure to ionizing radiation (radiation sickness).
Skills: analyze the importance of ionizing radiation on the formation of occupational pathology.
Skills: to have knowledge of legislative and legal bases in the field of safety and environmental protection; safety requirements of technical regulations in the field of professional activity; methods and technologies of protection in emergency situations; conceptual and terminological apparatus in the field of safety; skills of rationalization of professional activity in order to ensure safety and environmental protection; volume of medical care, content of measures, their dependence on the current situation.
Pathophysiology, clinical pathophysiology
Knowledge: morphological changes in body tissues in pathologies of the cardiovascular, respiratory, digestive, urinary and blood systems.
Skills: determine the contribution of pathophysiological processes to the development of diseases of internal organs. **Skills:** skills in analyzing
the patterns of functioning of individual organs and systems in norm and pathology; basic methods of assessing the functional state of the human body, skills in analyzing and interpreting the results of modern diagnostic technologies; skills in pathophysiological analysis of clinical syndromes, substantiate pathogenetic methods (principles) of diagnosis, treatment, rehabilitation and prevention of various pathological conditions.
Immunology
Knowledge: types of immunity, regulation of the immune response, causes of immunopathological conditions, clinical manifestations of immunopathology, basic methods for assessing immune status and principles of its assessment, indications for the use of immunotropic therapy.
Skills: identify syndromes and symptoms of diseases associated with disorders of the immune system, prescribe a clinical and immunological examination, formulate an immunological diagnosis, prescribe immunocorrective therapy and preventive measures to prevent diseases of the immune system.

Skills: algorithm for establishing a preliminary immunological diagnosis with subsequent referral to an allergist-immunologist; collecting immunological and allergological anamnesis, analysis and interpretation of laboratory results indicators of the immune system assessment using tests; establishing a preliminary diagnosis based on the results of laboratory and instrumental examination of patients; the basics of medical diagnostic and therapeutic measures to provide first aid in emergency and life-threatening conditions with immune disorders.
Pharmacology
Knowledge: pharmacokinetics, pharmacodynamics, side effects of various drugs on the body (II-III level).
Skills: write prescriptions for prescribed medications, know the indications and contraindications for their use.
Skills: algorithms for selecting drugs taking into account their pharmacokinetics, for patients with various nosological forms; algorithms for selecting drugs taking into account their main and side effects, the effects of their combined use in a given pathological process; skills in providing advisory assistance to the population on issues of taking drugs taking into account the morphofunctional characteristics and physiological state of the human body, dosage and storage conditions.
Propaedeutics of internal diseases
Knowledge: collection of complaints, anamnesis, objective methods of examination of patients (palpation, percussion, auscultation.
Skills: conduct anamnestic and physical examination, identify the main syndromes and symptoms of diseases of internal organs.
Skills: to have the skills of questioning and physical examination in diseases of the respiratory, cardiovascular, digestive, urinary, hematopoietic, endocrine systems and in diseases of the joints and connective tissue; the technique of general medical methods of examining patients with diseases of the respiratory system, cardiovascular system, gastrointestinal tract, hepatobiliary system, excretory system, endocrine system, hematological system, in diseases of the connective system and allergic diseases; the skill of diagnosing pneumonia, bronchial asthma, myocardial infarction, hepatitis, etc. based on the ability to interpret the results of chest X-ray, ECG, gastroscopy, blood, feces, urine tests and other studies studied during the course of the discipline of propaedeutics of internal diseases. **Public health and healthcare, health economics**
Knowledge: fundamentals of the legislation of the Russian Federation on public health protection, main regulatory and technical documents; population health indicators, factors that shape human health (environmental, professional, natural climatic, endemic, social, epidemiological, psycho-emotional, professional, genetic).
Skills: plan, analyze and evaluate the quality of medical care, the health status of the population and the impact of environmental and industrial factors on it; calculate medical statistics indicators. **Skills:** social-hygienic and clinical-statistical research methods to study the health status of the population, the volume
and quality of medical care from the standpoint of evidence-based medicine; methods of statistical analysis of indicators and assessment of population health; methods of planning the activities of medical organizations; methods of economic analysis of the state of health

organizations; methods of statistical analysis of indicators and assessment of the activities of a medical organization; use of legislative and regulatory documents governing the functioning of the healthcare system of the Russian Federation; maintenance of official documentation in healthcare; formation and analysis of accounting and reporting documentation of a medical organization, annual reports.
Pathological anatomy, clinical pathological anatomy
Knowledge: etiology, pathogenesis, morphogenesis, pathomorphosis of disease, principles of disease classification; structural and functional bases of diseases and pathological processes; causes, mechanisms of development and outcomes of typical pathological processes.
Skills: visually assess and record changes in the organs and tissues of a corpse, substantiate the nature of the pathological process and its clinical manifestations; give a conclusion on the cause of death and formulate a pathological diagnosis; **Skills:** the ability to compare morphological and clinical manifestations of diseases,
methods of clinical and anatomical analysis of autopsy, study of biopsy and surgical material.
Emergency conditions in therapy
Knowledge: etiology, pathogenesis, classification, clinical manifestations, complications, diagnosis, treatment and prevention of emergency conditions in therapy.
Skills: diagnose an urgent condition in the main therapeutic conditions, formulate and justify a clinical diagnosis, conduct differential diagnostics and provide emergency care. **Skills:** master examination methods (questioning, collecting objective subjective
information) for the purpose of diagnostics and differential diagnostics of the main clinical syndromes of emergency conditions in therapy; an algorithm for performing the main medical diagnostic and therapeutic measures in emergency conditions in therapy; assessing the severity of the patient's condition: determining the scope of first and emergency medical care and providing it; identifying indications for urgent or planned hospitalization; drawing up a treatment plan; identifying possible complications of drug therapy; adjusting the treatment plan.
Faculty therapy
Knowledge: etiology, pathogenesis, classification, clinical manifestations, complications, diagnosis, treatment and prevention of major diseases of the respiratory, cardiovascular, digestive, urinary and hematopoietic systems and occupational diseases.
Skills: formulate and justify a clinical diagnosis, prescribe an examination and treatment plan for the main therapeutic diseases, diagnose an urgent condition and provide emergency care.
Skills: algorithm of physical examination of a medical patient, methods of assessing the detected changes in organs and systems, algorithm of paraclinical examination of a patient for the main medical diseases, assessment of the results of additional (laboratory and instrumental) examination methods when working with a patient, algorithm of treatment (drug and non-drug) of the most common medical diseases that do not require emergency care, methods of emergency diagnosis of urgent conditions, methods of performing cardiopulmonary resuscitation on a simulator, algorithm of providing emergency care for urgent conditions in the clinic of internal diseases.

1.5 Interdisciplinary links with subsequent disciplines

Item No.	Name of subsequent disciplines	Section numbers of occupational diseases required for studying subsequent disciplines	
		1	2
1	Hospital therapy 2	+	+
	Outpatient therapy	+	+
3	Phthisiology	+	+
4	Clinical pharmacology 5	+	+
	Anesthesiology, resuscitation, intensive care 6	+	+
	Dermatovenereology 7	+	+
	Hospital surgery 8 Oncology,	+	+
	radiation therapy	+	+
9	Laboratory diagnostics	+	+

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1.6 Requirements for the results of mastering the discipline

The study of the discipline "Occupational diseases" is aimed at the formation/improvement of the following competencies: universal (UK), general professional (OPK), professional competencies (PC) - UK-1, 7, 11; OPK-1, 2, 4, 5, 7, 8, 10; PC - 1, 2, 3, 4, 5, 7, 8, 9, 12, 14.

No. p/p	Code and Name competencies	Code and name of the achievement indicator competencies	As a result of studying the academic discipline "Occupational diseases", the student must:		
			Know	Be able to	To own
Universal competencies					
1	UK-1. Capable carry out critical analysis problematic situations on basis systemic approach, develop a strategy of action	ID UK-1.1. Analyzes the problem situation as a system, identifying its components and the connections between them them. ID UK-1.3. Applies systems analysis to resolve problematic situations in the professional sphere.	main historical stages development of occupational diseases, discipline, tasks connection with other medical and biological And medical disciplines; main terms used	evaluate the contribution domestic scientists in the development of professional diseases	ability analyze significance occupational diseases on at the present stage
2	UK-7. Capable maintain an adequate level of physical fitness preparedness you to ensure full	ID UK-7.1. Observes and promotes healthy lifestyle standards in various life situations and in professional activities. ID UK-7.3. Selects health-saving technologies to maintain a healthy lifestyle, taking into account physiological characteristics organism.	causes of development of occupational diseases	recognize the connections between disease manifestations specific patient dysfunction I organs breathing during development, professional	systemic knowledge O at the causes of development main occupational diseases, factors risk, mechanisms their classifications,

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	social and professional Noah activities			x diseases	clinical current, diagnostics, treatment, prevention;
3	UK-11. Capable of forming intolerance attitude towards corruption in behavior	ID UK-11.3. Prevents corruption risks in professional activities, eliminates interference in its professional activities in cases of incitement to corruption offenses.	Basics legislation of the Russian Federation on public health protection, main normative and technical documents; health factors, indicators population, shaping health human	plan, analyze and evaluate quality medical help, state health population And influence on him environmental and production factors; calculate indicators medical statistics.	analysis And public presentation medical information on basis evidentiary medicine
	General professional competencies				
4	OPK-1. Capable to implement moral and legal norms, ethical and deontologically e principles in professional oh activities	ID OPK-1.1. Carries out professional activities in accordance with ethical norms and moral principles. ID OPK-1.2. Organizes professional activities, guided by legislation in the field of health care, knowledge of medical ethics and deontology.	main methodological approaches to working with educational, scientific, reference, medical literature, including online Internet.	on one's own work with educational, scientific, reference, medical literature, including on the Internet.	systemic approach to the analysis of educational, scientific, reference, medical information, including Internet sources
5	OPK-2.	ID OPK-2.2. Promotes a healthy lifestyle	prevention	formulate by methodology	

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	Capable conduct and monitor the effectiveness of preventive measures and the formation of a healthy lifestyle life and sanitary and hygienic education population	life, aimed at improving the sanitary culture and disease prevention of patients (population); organizes events on sanitary and hygienic education and the formation of healthy lifestyle skills. ID OPK-2.3. Develops a work plan for the formation of a healthy lifestyle for various contingents (staff and patients of medical organizations, various professional and social groups) taking into account the sanitary and epidemiological situation.	occupational diseases infectious and non- infectious	indications for the chosen method of treatment, taking into account the etiotropic and pathogenetically x means, to justify pharmacotherapy in a specific patient when main pathological syndromes and urgent states, determine the path administration, regimen and dosage of drugs drugs, evaluate the effectiveness and safety the treatment being carried out;	compilation and registration of a professional route for occupational diseases;
6	OPK-4. Capable apply medical products provided it's okay rendering medical	ID OPK-4.1. Uses modern medical technologies, specialized equipment and medical products, disinfectants, drugs, including immunobiological and other substances and their combinations when solving professional problems from the standpoint of evidence-based medicine.	ethical and deontological aspects relationships "doctor-doctor", "doctor-patient"	conduct a physical examination of the patient taking into account ethical and deontological principles	have skills communication with the patient, relatives colleagues, younger staff

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	assistance, as well as conduct examinations patient with purpose establishing a diagnosis				
7	OPK-5. Capable evaluate morphofunctional nal, physiological e states and pathological processes in in the human body for professional solutions y tasks	ID OPK-5.1. Knows the functional systems of the human body, their regulation and self-regulation when interacting with the external environment in the norm and in pathological processes.	methodology for analyzing performance results	justify the need for conducting analysis own activities	analysis skills medical practice
8	OPK-7. Capable assign treatment and monitor its effectiveness and safety	ID OPK-7.1. Selects a drug based on the totality of its pharmacokinetic and pharmacodynamic characteristics for the treatment of patients with various nosological forms in outpatient and inpatient settings. ID OPK-7.7. Assesses the effectiveness and safety of drug therapy based on a combination of clinical, laboratory, instrumental and other diagnostic methods.	basics of treatment, medical examinations and examination of work capacity;	develop a therapeutic plan taking into account individual characteristics, clinical currents diseases preceding of volume therapy, availability complications and	main medical diagnostic and therapeutic measures to provide first medical aid in emergency and life-threatening situations states.

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				concomitant pathology;	
9	OPK-8. Capable implement and monitor the effectiveness of medical rehabilitation the patient, including in the implementation of individual rehabilitation programs and rehabilitation of the disabled, conduct an assessment of ability patient realize labor activity	ID OPK-8.1. Assesses the functional reserves and adaptive abilities of a person, reduced in the process of unfavorable impact of environmental factors and activities or as a result of illness. ID OPK-8.3. Develops and organizes a plan of measures for medical rehabilitation of patients, including methods of non-drug treatment (natural healing factors, physiotherapy and reflexology, therapeutic exercise).	indications and contraindications to the use of drugs provided for by the procedures for the provision of medical care	apply medicinal drugs in in accordance with orders rendering medical help	readiness applications medicinal drugs and their combinations, provided by the procedures rendering medical help
10	OPK-10. Capable solve standard problems professional oh activities using informational	ID OPK-10.1. Maintains confidentiality when working with information databases and with individual data of citizens.	etiology and pathogenesis frequently occurring occupational diseases; hygienic criteria for assessing working conditions (orders of the Ministry of Health of the Russian Federation No. 29 n of 01/28/2021, No. 176 of 05/28/2001, No. 918 n of 08/15/2011,	fill in medical history, fill in professional anamnesis, write out recipe; determine the	systemic knowledge about reasons for development main occupational diseases, risk factors, their mechanisms development, classification,

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	x, bibliographic resources, medical and biological terminology, information and communication technologies taking into account main information requirements y security		27.04.2011)	additional research in in accordance with prognosis of the disease, for clarification of diagnosis and obtaining a reliable result;	clinical current, diagnostics, treatment, prevention;
		Professional competencies of the ID PC - 1.4.			
11	PC-1 Capable to render medical care in urgent and emergency forms	Provides emergency medical care to patients in conditions posing a threat to the patient's life ID PC - 1.6. Performs basic cardiopulmonary resuscitation measures in combination with electrical impulse therapy (defibrillation) in the event of clinical death of the patient (in case of sudden cessation of blood circulation and/or breathing).	symptoms, syndromes, risk factors occupational diseases and their complications, early diagnosis, principles of correction and elimination of risk factors	set priorities for addressing health issues patient: critical (terminal) condition, state of painful syndrome, state of chronic disease, state of infectious disease,	main medical diagnostic and medicinal events for the provision of first aid for urgent and threatening life states.

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				disability, geriatric problems;	
12	PC-2. Capable of collecting And and analyzing complaints, anamnesis life and anamnesis diseases patient with purpose establishments diagnosis	ID PC-2.3. Collects and analyzes information about the onset of the disease, the presence of risk factors, the dynamics of the development of symptoms and the course of the disease. ID PC-2.5. Collects and evaluates information about the anamnesis of life, including data on past illnesses, injuries and surgical interventions, hereditary, professional, epidemiological anamnesis.	clinical aspects professional diseases	collect complaints, anamnesis diseases, conduct a physical examination of the patient, make a plan examinations and analysis ÿ their results	skills interpretation of complaints, anamnesis, data physical examinations patient and additional methods research for productions diagnosis
13	PC-3. Capable conduct a physical examination patient, analyze the results of additional methods examinations with purpose establishments diagnosis	ID PC-3.4. Interprets and analyzes the results of collecting information about the patient's disease, data obtained during laboratory, instrumental examination and during consultations with the patient by medical specialists, if necessary, justifies and plans the scope of additional research ID PC-3.5. Performs early diagnostics of internal organ diseases. Establishes a diagnosis taking into account the current international statistical classification of diseases and related health problems (ICD)	main symptoms and professional syndromes diseases, ICD	identify syndromes and symptoms professional nyh diseases, to substantiate their nosological diagnosis in in accordance with classification of diseases	skill of analysis clinical manifestations occupational diseases, staging clinical diagnosis and its justification
14	PC-4. Capable determine indications for hospitalization, indications for emergency care,	ID PC-4.3. Uses medical products in accordance with current procedures for the provision of medical care, clinical recommendations (treatment protocols) on issues of providing medical care, care taking into account the standards of medical care	emergency care for life-threatening conditions; principles of treatment of diseases within the nosological forms under consideration;	plan, analyze and evaluate quality medical help,	main medical diagnostic and therapeutic measures to provide first aid

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	including, emergency specialized noah, medical help			state health population and influence on him environmental and industrial factors y sphere;	medical assistance in urgent and life-threatening situations states.
15	PC-5. Capable appoint treatment patients	ID PC-5.1. Draws up a treatment plan for the patient taking into account the diagnosis, age of the patient, clinical picture of the disease, presence of complications, concomitant pathology, in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on issues of providing medical care taking into account the standards of medical care	principles of treatment of diseases within the nosological forms under consideration; emergency care for life-threatening conditions;	formulate indications for the chosen method of treatment, taking into account the etiotropic and pathogenetically x means, to justify pharmacotherapy in a specific patient when main pathological syndromes and urgent states, determine the route of administration, regimen and dose of drugs drugs, evaluate the effectiveness and safety conducted	main medical diagnostic and therapeutic measures to provide first medical aid in urgent and life-threatening situations states.

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				treatment;	
16	PC-7-Capable guide the patient, having a persistent disruption of body functions caused by diseases, consequences injuries or defects in medical social expertise	ID PC-7.1. Identifies signs of temporary disability and signs of persistent impairment of body functions caused by diseases, consequences of injuries or defects ID PC-7.4. Refer a patient with persistent impairment of body functions caused by diseases, consequences of injuries or defects to medical and social care expertise	medical standards and clinical recommendations diagnostics and treatment of patients with occupational diseases	to use medical standards and clinical recommendations- yami	skills to work with medical standards and clinical recommendations
17	PC-8- Capable implement and monitor the effectiveness of individual rehabilitation y programs patients	ID PC 8.4. Monitors and evaluates the effectiveness and safety rehabilitation measures, taking into account the diagnosis and in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on issues of providing medical care, taking into account the standards of medical care	a set of measures aimed at maintaining and strengthening health and including the formation of a healthy lifestyle, preventing the occurrence and (or) spread of diseases, their early diagnosis,	identify reasons and conditions emergence and development professional diseases	methods organization plan medical rehabilitation activities patients, including number non-drug about treatment (natural healing factors, physiotherapy and reflexology, therapeutic exercise).
18	PC-9. Capable of conducting	ID PC 9.1. Organizes and conducts medical examinations taking into account age,	hygienic criteria for assessing working conditions	plan, analyze and	correct management

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	preventively their medical examinations, medical examinations And implementation of dispensary observation of patients with chronic diseases	health status, profession in accordance with current regulatory legal acts and other documents ID PC 9.3. Conducts outpatient observation of patients with identified chronic non-infectious diseases	(Orders of the Ministry of Health of the Russian Federation No. 29 n of 01/28/2021, No. 176 of 05/28/2001, No. 918 n of 08/15/2011, No. 417 n of 04/27/2011).	evaluate quality medical help, state health population and influence on him environmental and industrial factors y sphere;	medical documentation, skills in working with regulatory and materials, set out in standards specialized y medical care (orders of the Ministry of Health of the Russian Federation No. 302n of 12.04.2011, No. 176 of 28.05.2001, No. 918n of 15.08.2011, No. 417n of 27.04.2011
19	PC-12. Ready for maintaining medical records, in including in in electronic form	ID PC-12.1. Fills out medical documentation, including in electronic form	main methodological approaches to working with educational, scientific, reference, medical literature, including on the Internet	protect educational medical history, report on training duty	systemic approach to presentation of information
20	PC-14. Capable take part in scientific research oh activities	ID PC-14.1. Participates in scientific research	methodology of scientific research, principles statistical analysis	make up and fill in research protocol, conduct a statistical analysis received data	skills in working with medical documentation, statistical processing of the obtained data, the ability draw conclusions

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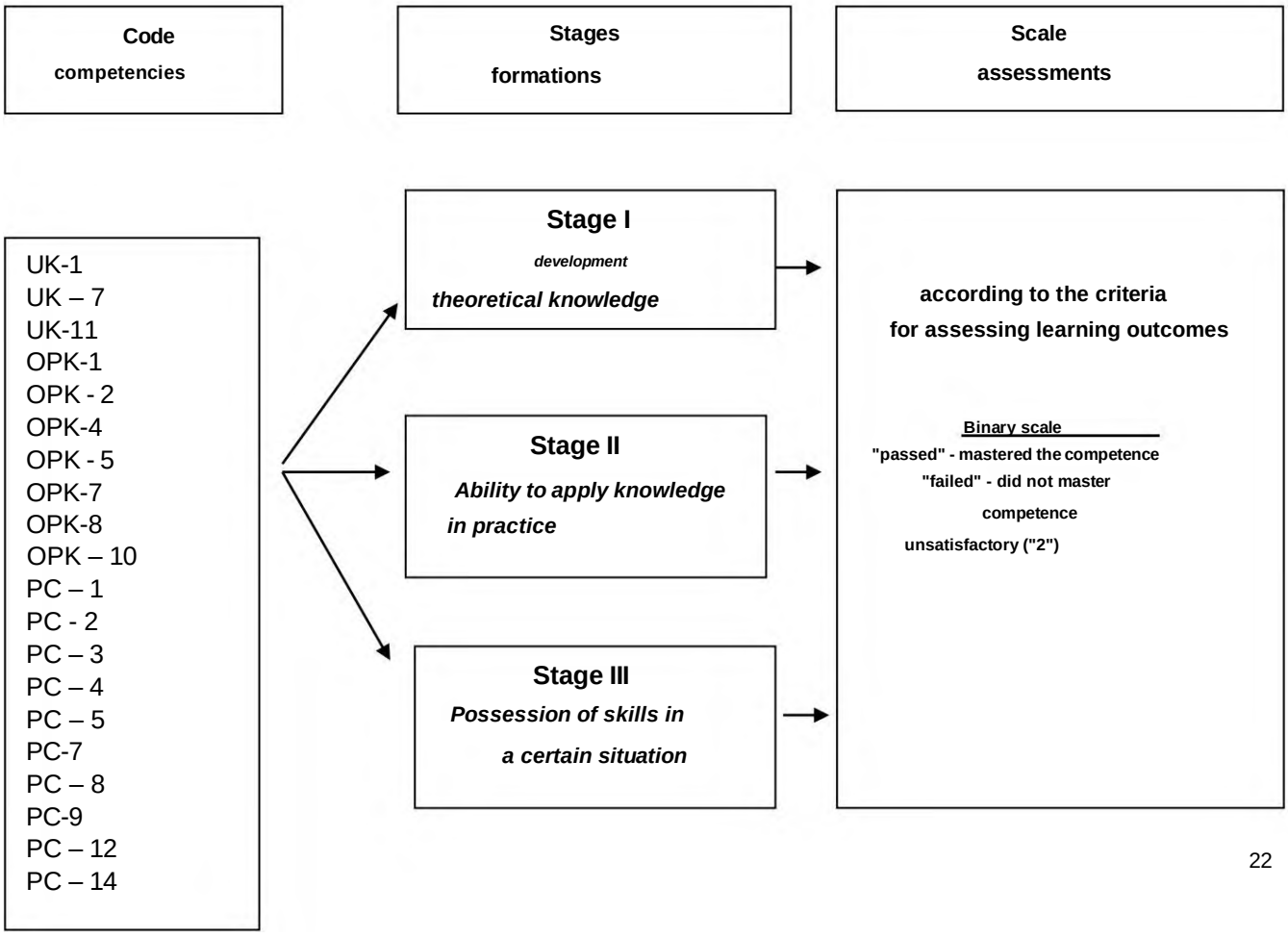
Section of discipline and code of the competence being formed

No. p/p	Section name	Code of the competence being formed
1.	General principles of diagnostics, treatment, prevention of occupational diseases. Medical and social expertise; occupational diseases caused by dust factors (dust bronchitis, pneumoconiosis).	UK-1, 7, 11; OPK-1, 2, 4, 5, 7, 8, 10; PC – 1, 2, 3, 4, 5, 7, 8, 9, 12, 14.
2.	Occupational diseases caused by physical and chemical factors (vibration disease, poisoning with aromatic hydrocarbons, lead, inorganic mercury, pesticides).	UK-1, 7, 11; OPK-1, 2, 4, 5, 7, 8, 10; PC – 1, 2, 3, 4, 5, 7, 8, 9, 12, 14.
	Total number of competencies – 20	

1.7. Stages of competence development and descriptions of assessment scales



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1.8 Forms of training organization and types of control

Forms and methods of control over the competencies acquired by students: current, midterm control, midterm assessment (interview on theoretical issues, testing, verification of acquisition of practical skills and abilities), credit.

Form of organization of students' training	Brief characteristic
Lectures	The lecture material contains key and most problematic issues of the discipline, the most significant in training of a specialist.
Practical classes	They are intended for the analysis (reinforcement) of theoretical principles and monitoring their assimilation with subsequent application of the acquired knowledge during the study of the topic.
Interactive forms of education	- solving situational problems and exercises with subsequent discussion, - interactive survey; - performing creative tasks, - small group method, - discussions, - online course of the discipline in the Moodle system, - testing in the Moodle system.
Participation in the department's research work, student circle and conferences	- preparation of oral presentations and poster reports for presentation at a student club or scientific conference; - writing abstracts and theses on the chosen scientific topic direction; - preparation of a literature review using educational, scientific, reference literature and the Internet – sources.
Types of control	**Brief description**
Incoming inspection	Testing theoretical knowledge and practical skills developed by the computer science program in secondary (complete) general education institutions. The entrance knowledge test includes: - testing in the Moodle system (input control test) knowledge), - solving situational problems and exercises. The results of the control are systematizinepdu,tanalyzed and used by the teaching staff of the department to develop measures to improve and update the methods of teaching the discipline.
Current control	Current knowledge control includes: - checking the solution of situational problems and exercises (extracurricular) completed on one's own independent work); - assessment of assimilation of theoretical material (oral survey

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	and computer testing); - control over the technique of performing the experiment during practical classes and drawing up the protocol; - testing in the Moodle system on all topics of the discipline (tests include questions of a theoretical and practical nature); - individual tasks (practical and theoretical) for each topic of the discipline studied. The
Intermediate certification	midterm assessment is presented by a credit at the end of 7 semester. The test includes the following stages: - assessment of knowledge of theoretical material (oral survey and interview); - testing in the Moodle system (interim assessment test); - testing the acquisition of practical skills and abilities; - solving situational problems and exercises on each topic of the discipline studied.

Explanation: Students receive theoretical knowledge of the discipline at lectures, clinical practical classes, taking part in the research work of the department, patient rounds with the head of the department, professor, associate professors, work in the department of functional diagnostics, X-ray room, clinical and biochemical laboratories. During practical classes, the learned material is consolidated and monitored. **Interactive forms** of training are used in the training process: business games, computer simulations, small group method, etc. Practical application of theoretical material in everyday work is logical in the process of cognition, helps to acquire practical skills and abilities. In the process of patient supervision, training duty, students consolidate and improve the basics of patient examination, skills of clinical, laboratory and instrumental interpretation of examination results, formulation of a clinical diagnosis, appointment of an examination and treatment plan, medical deontology, medical ethics. **Current control:**

The entrance control is carried out at the first lesson, is designed to determine the level of preparedness of students and includes testing on previously completed disciplines.

Initial and final assessment is conducted at each clinical practical lesson and includes an assessment of the theoretical knowledge and practical skills developed by students during the lesson and includes: **initial** (oral and test survey, frontal survey); **final** (testing practical skills, solving situational problems).

The final assessment (interim certification) includes a credit in VII semester and consists of an assessment of the theoretical knowledge and practical skills developed by students during the course, includes a final test control (in the Moodle system), protection of a professional anamnesis scheme, an interview on control questions, and solving a situational problem.

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2. STRUCTURE AND CONTENT OF THE DISCIPLINE

2.1 Scope of the discipline and type of academic work

Types of educational	Total hours	7th semester
work Lectures	14	14
Clinical practical classes	34	34
Independent work of students	24	24
Total labor intensity in hours	72	72
Total workload in credits units	2	2

Explanation: the training program for the discipline "Occupational diseases" for students of the medical faculty includes theoretical (lecture course) and practical training (clinical practical classes).

The training is conducted during the 7th semester and includes: 14 hours of lectures, 34 hours of clinical practical classes, 24 hours of independent work of students, the type of final control is a test (in the 7th semester).

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2.2 Thematic plan of lectures and their brief content

Item No.	Topics and content of lectures	Codes of formed competencies	Labor intensity (hours)
1.	Topic: "Introduction to the Clinic of Occupational Diseases" Introduction to the clinic of occupational diseases, definition and classification. Principles of OPC-4, OPC-5, OPC-7, OPC-8, OPC – diagnostics, prevention, examination of working capacity. Order of the Ministry of Health of the Russian Federation No. 29 n dated 10, PC - 1, PC - 2, PC - 3, PC - 4, PC - 5, PC - 7, PC - unfavorable production factors on reproductive PC - 14. system to a person.	UK-1, UK-7, UK-11, OPC-1, OPC-2, 8, PC - 9, PC - 12, 01/28/2021. the impact of	2
2.	Topic: "Dust diseases of the lungs. Pneumoconiosis" Classification, pathogenesis, clinical manifestations. Diagnostic methods, treatment, 10, PC - 1, PC - 2, PC - 3, PC - 4,	UK-1, UK-7, UK-11, OPK-1, OPK-2, OPK-4, OPK-5, OPK-7, OPK-8, OPK – prevention, examination of working capacity. PC – 5, PC – 7, PC – 8, PC – 9, PC – 12, PC – 14.	2
3.	Topic: "Chronic dust bronchitis" Definition. Classification, development mechanism, features depending on the type of dust. 10, PC - 1, PC - 2, PC - 3, prevention, examination of working capacity.	UK-1, UK-7, UK-11, OPK-1, OPK-2, OPK-4, OPK-5, OPK-7, OPK-8, OPK – PC - 4, Diagnostic criteria. Therapy, PC – 5, PC – 7, PC – 8, PC – 9, PC – 12, PC – 14.	2
4.	Topic: "Poisoning by aromatic hydrocarbons - benzene and its homologues" Classification, pathogenesis, diagnostic principles. Clinical manifestations, 10, PC - 1, PC - 2, PC - 3, PC - 4, differential diagnosis, The influence of PC - 5, PC- 7, PC - 8, PC - 9, PC - 12, on the human reproductive system. PC - 14.	UK-1, UK-7, UK-11, OPK-1, OPK-2, OPK-4, OPK-5, OPK-7, OPK-8, OPK – treatment, prevention, examination of working capacity.	2
5.	Topic: "Vibration Disease" Classification, pathogenesis. Clinical manifestations. Treatment, prevention, examination OPK -4, OPK -5, OPK-7, OPK -8, OPK – working capacity. 10, PC - 1, PC - 2, PC - 3, PC - 4, PC - 5, PC - 7, PC - 8, PC - 9, PC - 12,	UK-1, UK-7, UK-11, OPK-1, OPK-2,	2

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		PC – 14.	
6.	Topic: "Chronic Lead Intoxication" Classification, pathogenesis. Diagnostics. Clinical manifestations. Differential 10, PC - 1, PC - 2, PC - 3, PC - 4, diagnosis. Treatment, 5, PC - 7, PC - 8, PC - 9, PC - 12, PC - 14.	UK-1, UK-7, UK-11, OPK-1, OPK-2, OPK-4, OPK-5, OPK-7, OPK-8, OPK – prevention, examination of working capacity. PC -	2
7.	"Poisoning with inorganic mercury" Etiology, pathogenesis. Clinical manifestations. Syndromes. Treatment, prevention, 10, PC - 1, PC - 2, PC - 3,	UK-1, UK-7, UK-11, OPK-1, OPK-2, Topic OPK-4, OPK-5, OPK-7, OPK-8, OPK – PC - 4, examination of working capacity. PC – 5, PC – 7, PC – 8, PC – 9, PC – 12, PC – 14.	2
Total			14

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2.3 Thematic plan of clinical practical classes and their content

No. topics p/p	Named and that's it clinical practical classes	Contents of clinical practical classes	Codes of formed competencies and indicators their achievements	Types control	Labor intensive there is (hour)
1	**Introduction to professional clinic diseases.**	**Theoretical part:** classification of occupational diseases, principles of their diagnosis, prevention, treatment and examination of working capacity for them. Orders of the Ministry of Health of the Russian Federation No. 29 n of 01/28/2021, No. 176 of 05/28/2011, No. 918 n of 08/15/2011, No. 417 n of 04/27/2011. Organization and conduct of medical examinations of students of general and vocational education before and during industrial practice. The impact of unfavorable production factors on the human reproductive system, completing tasks according to the model. **Practical part:** analysis of a case study or archived medical history, supervision of patients, solving situational problems, preparing a workbook, a professional patient route, working with handouts, educational, scientific, medical and reference literature, standards of specialized medical help	UK-1, ID 1.3; UK – 7, ID 7.1; 7.3; UK 11, ID 11.3; OPK-1, ID 1.1; 1.2; OPK – 2, ID 2.2; 2.3; OPK 4, ID 4.1; OPK – 5, ID 5.1; OPK 7, ID 7.1; 7.7; OPK 8, ID 8.1; 8.3; OPK – 10, ID 10, 1; PC – 1, ID 1.4; 1.6; PC - 2, ID 2.3; 2.5; PC – 3, ID 3.4; 3.5; PC – 4, ID 4.3; PC – 5, ID 5.1; PK-7, ID 7.1; 7.4; PC – 8, ID 8.4; PK-9, ID 9.1; 9.3; PC – 12, ID 12.1; PC – 14, ID 14.1.	Current rating solution situational tasks, compiled and schemes to the profane no. Interacti obvious survey	3.4
2	**Pneumohorses ozers**	**Theoretical part:** Classification of pneumoconiosis, etiopathogenesis, clinical manifestations, features of the course of various forms of silicosis, examination of working capacity, primary and secondary prevention **Practical part:** supervision of patients, preparation of a workbook, professional patient route, work with handouts, educational, scientific, medical and reference literature, order of the Ministry of Health of the Russian Federation No. 29 n of 01/28/2021, standards of specialized medical care, completing tasks according to the sample	UK-1, ID 1.3; UK – 7, ID 7.1; 7.3; UK 11, ID 11.3; OPK-1, ID 1.1; 1.2; OPK – 2, ID 2.2; 2.3; OPK 4, ID 4.1; OPK – 5, ID 5.1; OPK 7, ID 7.1; 7.7; OPK 8, ID 8.1; 8.3; OPK – 10, ID 10, 1; PC – 1, ID 1.4; 1.6; PC - 2, ID 2.3; 2.5; PC – 3, ID 3.4; 3.5; PC –	Current rating Frontal ny survey, solution situational tasks, compiled and schemes to the profane no. Interacti	3.4

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			4, ID 4.3; PC – 5, ID 5.1; PK-7, ID 7.1; 7.4; PC – 8, ID 8.4; PK-9, ID 9.1; 9.3; PC – 12, ID 12.1; PC – 14, ID 14.1.	obvious survey	
3	**Chronically and dust bronchitis**	Theoretical part: Causes of the disease. Classification of pathogenesis. Clinic, features of the course, treatment. Differential diagnosis, treatment, prevention, examination of working capacity. Practical part: analysis of a case study or professional anamnesis scheme, supervision of patients, solving situational problems, preparing a workbook, a professional route of a patient, working with handouts, educational, scientific, medical and reference literature, standards of specialized medical care, completing tasks according to a model.	UK-1, ID 1.3; UK – 7, ID 7.1; 7.3; UK 11, ID 11.3; OPK-1, ID 1.1; 1.2; OPK – 2, ID 2.2; 2.3; OPK 4, ID 4.1; OPK – 5, ID 5.1; OPK 7, ID 7.1; 7.7; OPK 8, ID 8.1; 8.3; OPK – 10, ID 10, 1; PC – 1, ID 1.4; 1.6; PC - 2, ID 2.3; 2.5; PC – 3, ID 3.4; 3.5; PC – 4, ID 4.3; PC – 5, ID 5.1; PK-7, ID 7.1; 7.4; PC – 8, ID 8.4; PK-9, ID 9.1; 9.3; PC – 12, ID 12.1; PC – 14, ID 14.1.	Current rating Frontal ny survey, situational decision tasks, compiled and schemes to the profane no. Interacti obvious survey	3.4
4	**Terms and Conditions professional development flax diseases lungs, introduction to professional clinic flax diseases, dusty lung diseases**	**Theoretical part:** answers to control questions. Conditions of development of occupational lung diseases. Classification, pathogenesis. Differential diagnosis. Treatment. Prevention and examination of working capacity. **Practical part:** control testing, solving situational problems, working with handouts, educational, medical and reference literature, standards of specialized medical care	UK-1, ID 1.3; UK – 7, ID 7.1; 7.3; UK 11, ID 11.3; OPK-1, ID 1.1; 1.2; OPK – 2, ID 2.2; 2.3; OPK 4, ID 4.1; OPK – 5, ID 5.1; OPK 7, ID 7.1; 7.7; OPK 8, ID 8.1; 8.3; OPK – 10, ID 10, 1; PC – 1, ID 1.4; 1.6; PC - 2, ID 2.3; 2.5; PC – 3, ID 3.4; 3.5; PC – 4, ID 4.3; PC – 5, ID 5.1; PK-7, ID 7.1; 7.4; PC –	Current rating Frontal ny survey, decision situational tasks. Interacti obvious survey	3.4

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			8, ID 8.4; PK-9, ID 9.1; 9.3; PC – 12, ID 12.1; PC – 14, ID 14.1.		
5	**Vibration disease**	**Theoretical part:** Conditions for the development of vibration disease. Classification, pathogenesis. Features of the course. Differential diagnosis. Treatment. Prevention and examination of working capacity. **Practical part:** analysis of a case study or an archived medical history with a professional anamnesis scheme, solving situational problems, preparing a workbook, a professional patient route, working with handouts, educational, medical and reference literature, standards of specialized medical care, working with a tuning fork, completing tasks according to a model	UK-1, ID 1.3; UK – 7, ID 7.1; 7.3; UK 11, ID 11.3; OPK-1, ID 1.1; 1.2; OPK – 2, ID 2.2; 2.3; OPK 4, ID 4.1; OPK – 5, ID 5.1; OPK 7, ID 7.1; 7.7; OPK 8, ID 8.1; 8.3; OPK – 10, ID 10, 1; PC – 1, ID 1.4; 1.6; PC - 2, ID 2.3; 2.5; PC – 3, ID 3.4; 3.5; PC – 4, ID 4.3; PC – 5, ID 5.1; PK-7, ID 7.1; 7.4; PC – 8, ID 8.4; PK-9, ID 9.1; 9.3; PC – 12, ID 12.1; PC – 14, ID 14.1.	Current rating Frontal ny survey, situational decision tasks, compiled and schemes to the profane no. Interacti obvious survey	3.4
6	**Poisonings aromatic we** route, working with **his homologues**	**Theoretical part:** Types of aromatic hydrocarbons, their impact on humans and their reproductive function. Pathogenesis. Clinical manifestations, differential diagnosis. Treatment. Prevention and medical-labor examination. **Practical part:** analysis of a thematic patient or an archival medical history, **hydrocarbons** supervision of patients, solving situational problems, designing a workbook, **and - benzene and** the patient's professional handouts, educational, scientific, medical and reference literature, standards of specialized medical care, completing assignments	UK-1, ID 1.3; UK – 7, ID 7.1; 7.3; UK 11, ID 11.3; OPK-1, ID 1.1; 1.2; OPK – 2, ID 2.2; 2.3; OPK 4, ID 4.1; OPK – 5, ID 5.1; OPK 7, ID 7.1; 7.7; OPK 8, ID 8.1; 8.3; OPK – 10, ID 10, 1; PC – 1, ID 1.4; 1.6; PC - 2, ID 2.3; 2.5; PC – 3, ID 3.4; 3.5; PC – 4, ID 4.3; PC – 5, ID 5.1; PK-7, ID 7.1; 7.4; PC – 8, ID 8.4; PK-9, ID 9.1; 9.3; PC – 12, ID 12.1; PC	Current rating interactive obvious survey, solution situational tasks, compiled and schemes to the profane no	3.4

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			– 14, ID 14.1.		
7	**Chronic I am lead intoxication and l. Inorganic poisoning what mercury**	**Theoretical part:** Conditions for the development of lead poisoning, inorganic mercury pathogenesis, main clinical and laboratory manifestations, classification, treatment, prevention and medical-labor examination. The possibility of developing lead and inorganic mercury poisoning according to sanitary and hygienic characteristics, pathogenesis of poisoning, clinical manifestations, diagnostics. Effect on reproductive function. Treatment, preventive measures and medical-labor examination. **Practical part:** analysis of a case study or archived medical history, supervision of patients, solving situational problems, preparing a workbook, a professional patient route, working with handouts, educational, scientific, medical and reference literature, standards of specialized medical care, completing tasks according to a model	UK-1, ID 1.3; UK – 7, ID 7.1; 7.3; UK 11, ID 11.3; OPK-1, ID 1.1; 1.2; OPK – 2, ID 2.2; 2.3; OPK 4, ID 4.1; OPK – 5, ID 5.1; OPK 7, ID 7.1; 7.7; OPK 8, ID 8.1; 8.3; OPK – 10, ID 10, 1; PC – 1, ID 1.4; 1.6; PC - 2, ID 2.3; 2.5; PC – 3, ID 3.4; 3.5; PC – 4, ID 4.3; PC – 5, ID 5.1; PK-7, ID 7.1; 7.4; PC – 8, ID 8.4; PK-9, ID 9.1; 9.3; PC – 12, ID 12.1; PC – 14, ID 14.1.	Current rating Frontal ny survey, situational decision tasks, compiled and schemes to the profane no. Interacti obvious survey	3.4
8	**Professional diseases from physical factors, aromatic poisoning by them hydrocarbon ami, lead, inorganic what mercury**	**Theoretical part:** answers to control questions. Peculiarities of the clinical course of vibration disease; course of lead intoxication, intoxication with inorganic mercury; types of aromatic hydrocarbons, their impact on humans and their reproductive function. Pathogenesis. Clinical manifestations, differential diagnosis. Treatment. Prevention and medical-labor examination. **Practical part:** testing for control, solving situational problems, working with handouts, educational, scientific, medical and reference literature, standards of specialized medical care, completing assignments based on a sample.	UK-1, ID 1.3; UK – 7, ID 7.1; 7.3; UK 11, ID 11.3; OPK-1, ID 1.1; 1.2; OPK – 2, ID 2.2; 2.3; OPK 4, ID 4.1; OPK – 5, ID 5.1; OPK 7, ID 7.1; 7.7; OPK 8, ID 8.1; 8.3; OPK – 10, ID 10, 1; PC – 1, ID 1.4; 1.6; PC - 2, ID 2.3; 2.5; PC – 3, ID 3.4; 3.5; PC – 4, ID 4.3; PC – 5, ID 5.1; PK-7, ID 7.1; 7.4; PC – 8, ID 8.4; PK-9, ID 9.1; 9.3; PC – 12, ID 12.1; PC – 14, ID 14.1.	Current Interacti rating obvious survey, decision situational tasks.	3.4
9 Poisoning Theoretical part: Industries. Pathogenesis. Clinical manifestations of acute and			UK-1, ID 1.3; UK – 7, ID	Current	

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	pesticides chronic	poisoning with pesticides (phosphorus, organochlorine and organomercury compounds). Treatment. Prevention and examination of working capacity. **Practical part:** analysis of a case study or archived medical history, solving situational problems, preparing a workbook, a professional patient route, working with handouts, educational, scientific, medical and reference literature, standards of specialized medical care, completing tasks according to a model	7.1 ; 7.3; UK 11, ID 11.3; OPK-1, ID 1.1; 1.2; OPK - 2, ID 2.2; 2.3; OPK 4, ID 4.1; OPK - 5, ID 5.1; OPK 7, ID 7.1 ; 7.7; OPK 8, ID 8.1; 8.3; OPK - 10, ID 10, 1; PC - 1, ID 1.4; 1.6; PC - 2, ID 2.3; 2.5 ; PC - 3, ID 3.4; 3.5; PC - 4, ID 4.3; PC – 5, ID 5.1; PK-7, ID 7.1; 7.4; PC – 8, ID 8.4; PK-9, ID 9.1; 9.3; PC – 12, ID 12.1; PC – 14, ID 14.1.	rating Frontal ny survey, solution of the situation tasks, compiled and schemes to the profane no	3.4
10	**Intermediate naya certification (credit)**	**Theoretical part:** interview on control questions for midterm assessment (credit), answers to test control questions (in the Moodle system). **Practical part:** solving a situational problem.	UK-1, ID 1.3; UK – 7, ID 7.1; 7.3; UK 11, ID 11.3; OPK-1, ID 1.1; 1.2; OPK – 2, ID 2.2; 2.3; OPK 4, ID 4.1; OPK – 5, ID 5.1; OPK 7, ID 7.1; 7.7; OPK 8, ID 8.1; 8.3; OPK – 10, ID 10, 1; PC – 1, ID 1.4; 1.6; PC - 2, ID 2.3; 2.5; PC – 3, ID 3.4; 3.5; PC – 4, ID 4.3; PC – 5, ID 5.1; PK-7, ID 7.1; 7.4; PC – 8, ID 8.4; PK-9, ID 9.1; 9.3; PC – 12, ID 12.1; PC – 14, ID 14.1.	Intermediate rating Solution situational tasks, interactive obvious survey	3.4
	Total hours				34

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2.4 Interactive forms of learning

In order to activate students' cognitive activity in practical
Interactive teaching **methods** are widely used in classes .

Item No.	**Topic of clinical practice classes**	**We work hard bone in hours**	**Interactive form of learning**	**Labor intensity in hours, in % from the lesson**
		7th semester		
1	Introduction to the Clinic of Occupational Diseases	3.4	solving situational problems and exercises with subsequent discussion, interactive survey; performing creative tasks, small group method, discussions, online course disciplines in the system Moodle, testing in the Moodle system.	30 min. (0.5 hours)/14.7%
2	Pneumoconiosis	3.4	solving situational problems and exercises with subsequent discussion, interactive survey;	30 min. (0.5 hours)/14.7%
3	Chronic dust bronchitis	3.4	solving situational problems and exercises with subsequent discussion, interactive survey; performing creative tasks, small group method.	30 min. (0.5 hours)/14.7%
4	Conditions for the development of occupational lung diseases, introduction to the clinic of occupational diseases, dust lung diseases	3.4	solving situational problems and exercises with subsequent discussion, interactive survey; performing creative tasks, small group method.	30 min. (0.5 hours)/14.7%
5	Vibration disease	3.4	solving situational problems and exercises with subsequent discussion, interactive survey;	30 min. (0.5 hours)/14.7%
6	Aromatic poisoning	3.4	performing creative tasks,	30 min. (0.5 hours)/14.7%

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	hydrocarbons - benzene and its homologues		small group method, discussions, online course of the discipline in the Moodle system.	
7	Chronic lead intoxication, inorganic mercury poisoning	3.4	performing creative tasks, small group method, discussions, online course of the discipline in the Moodle system.	30 min. (0.5 hours)/14.7%
8	Occupational diseases from physical factors, poisoning with aromatic hydrocarbons, lead, inorganic mercury	3.4	performing creative tasks, small group method, discussions, online course disciplines in the system Moodle.	30 min. (0.5 hours)/14.7%
9	Pesticide poisoning	3.4	performing creative tasks, small group method, discussions, online course disciplines in the Moodle system.	30 min. (0.5 hours)/14.7%
10	Interim assessment (credit)	3.4	performing creative tasks, small group method, discussions, online course of the discipline in the Moodle system.	30 min. (0.5 hours)/14.7%

2.5. Criteria for assessing students' knowledge

The assessment of learning outcomes is carried out in accordance with the “Regulations on the assessment system for the learning outcomes of students of the Federal State Budgetary Educational Institution of Higher Education Amur State Medical Academy of the Ministry of Health of Russia”.

The basis for determining the level of knowledge, skills, and abilities are the criteria assessments – completeness and correctness: - correct, precise answer; - correct, but incomplete or inaccurate answer; - incorrect answer;

- no answer.

When assigning marks, the classification of errors and their quality are taken into account: - gross errors; - similar errors;

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- minor errors;
- shortcomings.

Distribution of marks in practical classes

No. p/p	Clinical Topic practical lesson	Theoretical what part	Practical what part	General grade	Forms of control
1.	Introduction to the Clinic of Occupational Diseases	2-5	2-5	2-5	**Theoretical part** Oral or writing survey - Tests tasks, including computer **Practical part** Interview, situational tasks, examination practical skills at the patient's bedside, registration of educational medical histories (professional schemes) (medical history) and skills to work with regulations, filling out documents - Performing exercises according to the model
2.	Pneumoconiosis	2-5	2-5	2-5	
3.	Chronic dust bronchitis Conditions for the	2-5	2-5	2-5	
4.	development of occupational lung diseases, introduction to the clinic of occupational diseases, dust lung diseases	2-5	2-5	2-5	
	Vibration disease Poisoning	2-5	2-5	2-5	
5 6	with aromatic hydrocarbons - benzene and its homologues	2-5	2-5	2-5	
7	Chronic lead intoxication, inorganic mercury poisoning	2-5	2-5	2-5	
8	Occupational diseases from physical factors, poisoning with aromatic hydrocarbons, lead, inorganic mercury	2-5	2-5	2-5	
9 Pesticide poisoning 10 Interim		2-5	2-5	2-5	
assessment (credit) Professional history chart		2-5	2-5	2-5	
				2-5	
Average score					

2.5.1 Assessment scales for current knowledge control

Successful mastery of the discipline "Occupational diseases" by students, is determined by the quality of acquisition of knowledge, skills and practical abilities, the assessment is given on a 5-point system: “5” - excellent, “4” - good, “3” - satisfactory, “2” – unsatisfactory.

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Evaluation criteria

Success rate 90-100%	Mark on a 5-point scale
80-89%	"5"
70-79%	"4"
Below	"3"
70%	"2"

Incoming inspection

Conducted during the first lesson, includes testing in the Moodlÿ system.
Access mode: https://educ-amursma.ru/course/view.php?id=627
The test control includes questions on the subjects studied in previous courses.

Current control

Current control includes initial and final control of knowledge.
Initial control - is carried out by the teacher at the beginning of each lesson in the form of a frontal survey, solving situational problems. Final control - includes control over the
methodology of performing practical skills and drawing up a protocol, testing in the Moodle system.

Access mode https://educ-amursma.ru/course/view.php?id=627
The final grade during the current knowledge assessment is given on the day of the lesson, as the arithmetic mean result for all types of activities provided for in the given lesson of the discipline's work program.

Assessment criteria (grades) of the theoretical part

"5" - for the depth and completeness of mastering the content of the educational material, in which the student can easily navigate, for the ability to combine theoretical questions with practical ones, express and justify their judgments, correctly and logically present an answer; when testing, allows up to 10% of erroneous answers. **"4" -** the student has fully mastered the educational material, is guided in it, correctly presents the answer,
but the content and form have some inaccuracies; when testing, allows up to 20% of erroneous answers. **"3"** - the student has mastered the knowledge and understanding of the main provisions of the educational material, but presents it incompletely, inconsistently, does not know how to
express and justify their judgments; when testing, allows up to 30% of erroneous answers. **"2"** - the student has fragmented and unsystematic knowledge of the educational material, is unable to distinguish between the main and the secondary, makes mistakes in defining concepts, distorts their meaning, presents the
material in a disorderly and uncertain manner, and makes more than 30% of erroneous answers when tested.

Assessment criteria for the practical part

"5" - the student supervises the thematic patient on a daily basis, has fully mastered the practical skills and abilities provided by the work program of the discipline
(correctly interprets the patient's complaints, anamnesis, objective examination data, formulates a clinical diagnosis, prescribes examination and treatment, interprets clinical, laboratory and instrumental indicators taking into account the norm).

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"4" - the student supervises the subject patient on a daily basis, has fully mastered the practical skills and abilities provided for by the course work program, but makes some inaccuracies. **"3" -** the student supervises the patient irregularly, the student has only some practical skills and abilities. ***"2"***
- the student has visited the supervised patient less than 4 times, performs practical skills and abilities with gross errors.

Criteria for evaluation of educational medical history

"5" - the educational medical history is prepared in accordance with the requirements. **"4"**
- the student makes some inaccuracies in the formulation of the detailed clinical diagnosis, examination and treatment in the educational medical history. **"3" -** the educational medical history is prepared with errors, written in illegible handwriting, there are inaccuracies in the formulation of the detailed clinical diagnosis, treatment, the pathogenesis of the disease is not fully covered. **"2" -** the medical history is written in illegible handwriting, with gross errors (the detailed clinical diagnosis is not made and not substantiated, the treatment is prescribed incorrectly, the pathogenesis of the disease is not covered.

Working off disciplinary debts

If a student misses a class for a valid reason, he/she has the right to make it up and receive the maximum grade stipulated by the course work program for that class. A valid reason must be documented. If a student misses a class for an invalid reason or receives a grade of "2" for all activities in the class, he/she must make it up. In this case, the grade received for all activities is

multiplied by 0.8. If a student is excused from a class at the request of the dean's office (participation in sports, cultural and other events), he/she is given a grade of "5" for that class, provided that he/she submits a report on the completion of mandatory extracurricular independent work on the topic of the missed class.

2.5.2 Criteria for assessing midterm assessment

Interim certification is carried out in 4 stages:

1. Test control in the "Moodlÿ" system https://educ-amursma.ru/course/view.php?id=627
2. Defense of the educational medical history (professional anamnesis scheme)
3. Interview on control questions. 4. Solution of a situational problem.

Criteria for final assessment (midterm assessment)

passed - the student has fully mastered the content of the educational material in which he is oriented, can connect theoretical questions with practical ones, express and justify his judgments, correctly and logically present the answer; during testing allows from 10 to 30% of erroneous answers. Practical skills and abilities provided by the working program of the discipline have been mastered completely or with minor comments.

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"failed" - the student has fragmentary and unsystematic knowledge of the educational material, is unable to distinguish between the main and secondary, makes mistakes in defining concepts, distorts their meaning, presents the material in a disorderly and uncertain manner, and makes more than 30% of erroneous answers during testing. Performs practical skills and abilities with gross errors.

Assessment criteria for midterm assessment

Stages	Mark out of 5 point scale	Binary scale
Test control in the system "Moodle" 3-5		passed
Full implementation 3-5 practical part of the discipline		
Delivery of practical skills (control of the formation of competencies)	3-5	
Test control in the system "Moodle" 2		not credited
Fully implemented 2 practical part of the discipline		
Delivery of practical skills (control of the formation of competencies)	2	

2.6. Independent work of students: in-class and out-of-class

Students' independent work consists of two components: classroom and extracurricular (mandatory for all students and optional) work.

2.6.1. Independent classroom work of students

Students' independent work in the classroom takes up 25% of the time, allocated for the lesson. Classroom work includes: the main didactic tasks of independent work of students under the guidance of the teacher: consolidation of knowledge and skills acquired during the study of the academic discipline in lectures and practical classes; prevention of their forgetting; expansion and deepening of the educational material; formation of the ability and skills of independent work; development of independent thinking and creative abilities of students.

The students' classroom work includes: checking their current knowledge on the topic of the practical lesson in the form of an oral or written survey, test control, solving situational problems, interpreting laboratory and instrumental indicators, drawing up an examination and treatment plan. Familiarization with the department's available methodological manuals, tables, diagrams, stands, tablets. Supervision of patients and preparation of the educational medical history. Individual work with the development and implementation of practical skills.

2.6.2 Extracurricular independent work of students

The following can be used as the main forms of extracurricular independent work: studying basic and additional educational and scientific literature; solving situational problems, tests, working in an online classroom; preparing oral reports; writing an educational medical history; being on duty at the clinic; preparing a report on duty, performing diagnostic manipulations;

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implementation of observation and self-observation of specific clinical phenomena being studied, etc. This type of educational activity should be based on the activity, initiative, consciousness and self-activity of students.

Extracurricular independent work of students

Clinical Topic practical lesson	Time prep ki student To occupation (hour.)	Forms of extracurricular independent work	
		Mandatory and the same for all students	At the student's choice
		On-call duty, duty report	
Introduction to the Clinic of Occupational Diseases	2	Patient care. Working with medical histories, professional anamnesis schemes. Working in functional offices, clinical and biochemical laboratories, keeping a workbook, drawing up a professional anamnesis. Study of 1.2 appendixes of the order of the Ministry of Health of the Russian Federation No. 29 n dated 01/28/2021, sanitary and hygienic characteristics of the patient's working conditions.	Report or computer presentation on the topic: "Classification of occupational diseases. Types of production factors. Prevention and examination of working capacity. Rehabilitation in occupational diseases"
Pneumoconiosis	2	Patient care. Working with medical records. Working in functional rooms, clinical and biochemical laboratories, keeping a workbook, drawing up a professional anamnesis. Studying the appendix of the order of the Ministry of Health of the Russian Federation No. 29 n of 01/28/2021. Solving (or compiling) situational problems, drawing up a professional anamnesis, preparing for a patient report	Report or computer presentation on the topic: "Industries where the disease occurs pneumoconiosis. X-ray diagnostics pneumoconiosis".
Chronic dust bronchitis	2	Preparation on theoretical issues (lectures, basic and additional literature, methodological recommendations, abstracting, drawing up notes, diagrams, algorithm, etc.). Solution (or compiling) tasks, tests, writing recipes, algorithms, completing tasks according to a sample, completing a medical history, workbook, work in the online classroom.	Report or computer presentation on the topic: "Industries where the disease occurs chronic dust bronchitis and occupational bronchial asthma.
Conditions for the development of occupational lung diseases	2	Preparing for the lesson theoretical issues (lecturing, basic and additional literature), abstracting, writing notes, etc. Drawing up a professional anamnesis,	Preparing a presentation or making a table, tablet on the topic: Study of the structure and dynamics of occupational pathology in the Amur region

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		workbook.	
Vibration disease	**2**	Patient care. Working with medical records. Working in functional rooms, clinical and biochemical laboratories, keeping a workbook, drawing up a professional anamnesis. Solution situational tasks, preparation of a professional anamnesis, preparation for a patient report. Preparation on theoretical issues (lectures, primary and secondary literature), abstracting, compiling notes, etc.	Preparing a presentation or review paper By topic: « about influence vibrations on the nervous system human system. Preparing a review literature »
Aromatic hydrocarbon poisoning - benzene and its homologues	**2**	Patient care. Working with medical histories. Working in functional rooms, clinical and biochemical laboratories, keeping a workbook, drawing up a professional anamnesis, solving (or compiling) situational tasks, professional design anamnesis, preparation for the patient's report	Preparing a presentation or review paper By topic: "Application in industry aromatic hydrocarbons, their influence on reproductive system"
Chronic lead intoxication. Inorganic mercury poisoning.	**2**	Patient care. Working with medical records. Working in functional rooms, clinical and biochemical laboratories, keeping a workbook, drawing up a professional anamnesis. Solution situational tasks, professional design anamnesis, preparation for frontier control.	Preparing a presentation or review paper By Topic: "The Use of Lead in Industry", History of Inorganic Mercury Poisoning".
Occupational diseases from physical factors of poisoning with aromatic hydrocarbons, lead, inorganic mercury	**2**	Patient care. Working with medical histories. Working in functional rooms, clinical and biochemical laboratories, keeping a workbook, drawing up a professional anamnesis. Preparation for the lesson on theoretical issues (lecturing, basic and additional literature), abstracting, writing notes, etc. Preparation of a professional anamnesis, workbook.	Presentation by industry industries where are applied aromatic hydrocarbons, lead, vibration
Pesticide poisoning	**1**	Patient care. Working with medical records. Working in functional	Preparing a presentation or review paper By

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		offices, clinical and biochemical laboratories, keeping a workbook, drawing up a professional anamnesis. Solving (or drawing up) situational problems Drawing up a professional anamnesis, workbook, preparation for defense professional anamnesis and for the credit lesson	topic: "Sharp and chronic poisoning pesticides."
Interim assessment (credit)	1 2	Solution of clinical and situational issues tasks and tests of the intermediate knowledge control. Preparing to defend your professional anamnesis. Preparation on theoretical issues (lectures, basic and additional literature), abstracting, making notes, etc.	Making a tablet, archival medical history or schemes professional anamnesis
Labor intensity in hours Total	**20**	**20**	**4**
labor intensity in hours	**24**		

2.7. Research (project) work of students

Research (project) work (RW) of students is a mandatory section of the discipline and is aimed at the comprehensive formation of universal, general professional, professional competencies of students, provides for the study of specialized literature and other scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge, participation in scientific research, etc. The topics of RW can be chosen by students independently in consultation with the teacher or from the list below (taking into account the scientific direction of the department). Approximate topics of research (project) work of students:

Clinical and functional features of chronic dust bronchitis,

1. prevalence in the Amur region.
2. Features of the clinical course, structure of occupational diseases in Amur region.
3. Current issues of diagnostics, the impact of aromatic hydrocarbons on women's health, and pregnancy.

To assess research work, a binary assessment scale is adopted: "passed", "failed".

3. EDUCATIONAL, METHODOLOGICAL, MATERIAL, TECHNICAL AND INFORMATION SUPPORT OF THE DISCIPLINE

3.1 Main literature

1. Mukhin, N. A. Occupational diseases: textbook / N. A. Mukhin [etc.]. - 2nd ed. reworked, and additional - Moscow: GEOTAR-Media, 2020. - 512 p.: ill. - 512 s. - ISBN 978-5-9704-6165-5. Subscription access mode.

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http://www.studmedlib.ru/book/ISBN9785970461655.html

3.2 Further reading

1. Babanov, S. A. Occupational diseases and military field therapy: textbook / edited by Babanov S. A., Strizhakova L. A., Fomin V. V. - Moscow: GEOTAR-Media, 2019. - 576 p. ,- ISBN 978-5-9704-5076-5. - Access mode: by subscription. http://www.studmedlib.ru/book/ISBN9785970450765.html

2. Pankova, V. B. Occupational diseases of ENT organs / V. B. Pankova, I. N. Fedina; under the general editorship of I. V. Bukhtiyarov, N. A. Daikhes. - Moscow: GEOTAR-Media, 2021. - 544 p. - ISBN 978-5-9704-6069-6. - Access mode: by subscription. http://www.studmedlib.ru/book/ISBN9785970460696.html

3. Khrupachev, A. G. Industrial safety and professional health: a guide for doctors / edited by A. G. Khrupachev, A. A. Khadartsev. - Moscow: GEOTAR-Media, 2012. - 336 p. - Access mode: by subscription. http://www.studmedlib.ru/book/06-COS-2349.html

3.3. Educational and methodological support prepared by the department staff

1. Savinova T.A., Grigorenko A.A. Pneumoconiosis, dust bronchitis in persons engaged in open-pit mining of brown coal. Study guide Blagoveshchensk, 2000, 146 p.

2. Savinova T.A., Rukosueva A.A. Diagnostics and prevention of vibration disease and occupational diseases in workers in open-pit mining of brown coal. Educational – methodological manual Blagoveshchensk, 2002, 32 p.

3. Savinova T.A., Rukosueva A.A. Diseases of the sensory system from functional overstrain and vibrations. Study guide Blagoveshchensk, 2003, 24 pages.

4. Savinova T.A., Moskalenko A.I., Karpova V.V. Pesticide poisoning. Educational – methodological manual Blagoveshchensk, 2006, 16 p.

Electronic and digital technologies:

Presentations used in teaching students (prepared by department staff)

1. Presentation on industries where occupational dust diseases occur. 2. X-ray diagnostics of pneumoconiosis.

3. Industries affected by vibration disease.
4. Industries with chronic lead intoxication.
5. Industries affected by aromatic hydrocarbon poisoning.
6. Industries affected by pesticide poisoning.
7. Berryliosis.
8. Chronic mercury poisoning

Access mode: https://educ-amursma.ru/course/view.php?id=627

List of tables, tablets, handouts used in training

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(prepared by the department staff)
Tables.
Pneumoconiosis
Classification of occupational diseases.
Classification of chronic lead intoxication.
Diagnostic criteria for occupational bronchial asthma.
Prevention of occupational diseases.
Classification of poisoning by benzene and its homologues.
Classification of vibration disease.

Tablets.
1. Pneumoconiosis
2. Classification of occupational diseases.
3. Classification of chronic lead intoxication.
4. Diagnostic criteria for occupational bronchial asthma.
5. Prevention of occupational diseases.
6. Classification of poisoning with benzene and its homologues.
7. Classification of vibration disease.

Handouts: tasks, tests, archival schemes of profanamnesis, sanitary – hygienic characteristics, RF Ministry of Health No. 29 n dated 01/28/2021, ECG, spirograms, forms with biochemical blood tests, various means of sputum, radiographs, clinical, demonstration drugs (medicines used in pulmonary medical practice, delivering drugs to the respiratory tract).

Electronic teaching aids:

posted on the website of the Federal State Budgetary Educational Institution of Higher Education Amur State Medical Academy.

Access mode: https://www.amursma.ru/zakrytaya-chast-sayta/4-kurs/

3.4 Equipment used for the educational process.

Item No.	Name	Quantity stvo
	Study room #3	
1	Blackboard	1
2	Teacher's desk Desk Chair	1
3	MFP Negatoscope	6
4	chair	12
5		1
6	Thematic table	1
7	Folder-booklet with a set of	2
8	ECGs Folder-booklet with a set of X-	1
9	rays **Classroom of the Department of Topographic**	1
	Anatomy of the Morphological Building	
10	Laptop, Video projector **The**	1
	educational process uses the equipment of the bronchoscopy room of the State Autonomous Healthcare Institution of the Arkhangelsk Regional Clinical Hospital	

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11	Bronchofiberscope BF-P 60 Pulse	1
12	oximeter	1

3.5. Professional databases, information and reference systems, electronic educational resources

No. p. p.	Name resource	Resource Description	Access	Resource address
Electronic library systems				
1	"Student Consultant" Electronic Library medical school.	For students and teachers of medical and pharmaceutical universities. Provides access to electronic versions of textbooks, teaching aids and periodicals.	library, individual th access	http: // www .studmedli b.ru/
2	"Doctor's Consultant" Electronic medical library.	The materials posted in the library have been developed by leading Russian by specialists on the basis of modern scientific knowledge (evidence-based medicine). The information was prepared with the library, taking into account scientific and individual practical medical society (world, European and Russian) on relevant specialty. All materials have undergone mandatory independent reviewing.	the position of th access	http://www w.rosmedl ib.ru/cgi-bin/mb4x
3	PubMed	Free search engine in the largest medical bibliographic database MedLine. Documents medical and biological articles from the specialized literature and provides links for full-text articles.	library, free access	https://pub med.ncbi.nl m.nih.gov/
4	Oxford Medicine Online.	A collection of Oxford Press medical publications, bringing together over 350 titles into a single, cross-searchable resource. Publications include The Oxford Handbook of Clinical Medicine and The Oxford Textbook of Medicine, electronic versions of which	library, free access	http://www. oxfordmedi cine.com

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		are constantly updated.		
5	Human Biology Knowledge Base	Reference information on physiology, cell biology, genetics, biochemistry, immunology, pathology. (Resource of the Institute of Molecular Genetics of the Russian Academy of Sciences.)	library, free access	http://hum bio.ru/
6	Medical online library	Free reference books, encyclopedias, books, monographs, abstracts, English-language literature, tests.	library, free access	http://med -lib.ru/
		Information systems		
7	Russian medical association	Professional Internet - resource. Objective: to promote the implementation of effective professional activities of medical personnel. Contains the charter, personnel, structure, rules of entry, information about the Russian medical union.	library, free access	http://www w.rmass.ru /
8	Web-medicine	The site presents a catalog of professional medical resources, including links to the most authoritative subject sites, journals, societies, as well as useful documents and programs. The site is intended for doctors, students, employees of medical universities and scientific institutions. **Databases**	library, free access	http: // webmed. irkutsk.ru/
9	Worldwide health care organization	The site contains news, statistical data on countries that are members of the World Health Organization, newsletters, reports, WHO publications and much more. The website of the Ministry of Science and Higher Ministry of	library, free access	http://www w.who.int/ ru/
10	contains news, Russian newsletters, reports, publications and much more. The website of the Ministry of Education of the Russian Federation contains news, newsletters, reports, publications and much more.	Science and Education of the Russian Federation	library, free access	http://www. minobrnauki .gov.ru
11	Ministry of Education of the Russian Federation.		library, free access	https://edu .gov.ru/

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12	Federal portal "Russian education"	A single window for access to educational resources. This portal provides access to textbooks on all branches of medicine and health care.	library, free access	http: // www .edu.ru/ http://window w.edu.ru/ca talog/?p rubr=2.2.81 .1
	Bibliographic databases			
13	Database "Russian medicine"	It is created in the Central Scientific and Methodological Library and covers the entire collection, starting in 1988. The database contains bibliographic descriptions of articles from domestic journals and collections, dissertations and their abstracts, as well as domestic and foreign books, collections of institute proceedings, conference materials, etc. Thematically, the database covers all areas of medicine and related areas of biology, biophysics, biochemistry, psychology, etc. etc.	library, free access	http://www w.scsml.rs si.ru/
14	eLIBRARY.RU	Russian information portal in the field of science, technology, medicine and education, containing abstracts and full texts of more than 13 million scientific articles and publications. The eLIBRARY.RU platform provides electronic versions of more than 2,000 Russian scientific and technical journals, including more than 1,000 open-access journals. Currently, the Electronic Library of Dissertations of the Russian	library, free access	http://elibrar y.ru/defaultx .asp
15	Portal Electronic dissertation library	State Library contains more than 919,000 full texts of dissertations and abstracts. Medical and biological portal for specialists. Biomedical journal. Last updated February	library, free access	http://diss. rsl.ru/?me nu=disscat alog/
16	Medline.ru	7, 2021.	library, free access	http://www w.medline .ru

3.6. Licensed and freely distributed software used in the educational process

I. Commercial software products
1. Operating system MS Windows 7 Pro License number 48381779
2. Operating system MS Windows 10 AGREEMENT No. 142 A dated 12/25/2019

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Pro, MS Office	
3. MS Office	License number: 43234783, 67810502, 67580703, 64399692, 62795141, 61350919
4. Kaspersky Endpoint Security for Business Advanced	Agreement No. 977/20 dated 12/24/2020
5. 1C: PROF University	LICENSE AGREEMENT No. 2191 dated 15.10.2020
6. 1C: PROF Library	LICENSE AGREEMENT No. 2281 dated 11.11.2020
II. Freely distributed software	
1. Google Chrome	Freely distributed Distribution Terms: https://play.google.com/about/play-terms/index.html
2. Yandex Browser	Freely distributed Licensed agreement on usage programs Browser «Yandex» https://yandex.ru/legal/browser_agreement/
3. Dr.Web CureIt!	Freely distributed Licensed agreement: https://st.drweb.com/static/new- www/files/license_CureIt_ru.pdf
4. OpenOffice	Freely distributed License: http://www.gnu.org/copyleft/lesser.html
5. LibreOffice	Freely distributed License: https://ru.libreoffice.org/about-us/license/

3.7 Resources of the information and telecommunications network "Internet"

Internet resources:

Internet resources:

Standards of Primary Health Care
https://minzdrav.gov.ru/ministry/61/22/stranitsa-979/stranitsa-983/1-standarty-pervichnoy-mediko-sanitarnoy-pomoschi

Standards of specialized medical care
https://minzdrav.gov.ru/ministry/61/22/stranitsa-979/stranitsa-983/2-standarty-spetsializirovannoy-meditsinskoy-pomoschi

Procedures for providing medical care to the population of the Russian Federation
https://minzdrav.gov.ru/ministry/61/4/stranitsa-857/poryadki-okazaniya-meditsinskoy-pomoschi-naseleniyu-rossiyskoy-federatsii

Federal Electronic Medical Library http://www.femb.ru

(Clinical guidelines)

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4. Evaluation Fund

4.1. Current test control (input, initial, output), final.

4.1.1. Examples of entrance control test tasks (with standard answers)

Test assignments are located in the Moodle system
Access mode: **https://educ-amursma.ru/course/view.php?id=627**
Total number of tests – 149.

1. AUTHOR OF THE CLASSIFICATION OF CIRCULAR FAILURE 1935
   1) N. D. Strazhesko
   2) A. A. Ostroumov
   3) A.G. Chuchalin
   4) S. P. Botkin

2. AUTHOR OF THE METHOD OF DEEP PALPATION OF THE ABDOMINAL CAVITY IN 1887.
   1) V. P. Obraztsov
   2) A.L. Myasnikov
   3) G. F. Lang
   4) S. P. Botkin

3. THE CAUSATIVE AGENT OF ULCER DISEASE IS
   1) Helicobacter pylori
   2) Borrelia caucasica
   3) Borrelia burgdorferi
   4) Treponema perteneum

Answers: 1- 1; 2- 1; 3- 1.

4.1.2. Examples of test tasks for initial control (with standard answers)

Test assignments are located in the Moodle system
Access mode: **https://educ-amursma.ru/course/view.php?id=627**
Total number of tests – 100.

1. THE BEGINNING OF VIBRATION DISEASE FROM THE IMPACT OF LOCAL VIBRATION:
1) sharp
2) subacute
3) chronic
4) latent

2. THE RED COLOR OF URINE IN SATURNISM IS CAUSED BY
1) hematuria
2) increase in coproporphyrin
3) increasing the lead in the sword
4) increase in bilirubin

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3. IN CASE OF POISONING WITH NITRO COMPOUNDS OF BENZENE, THERE MAY BE
toxic effect on the central nervous system
1) significant methemoglobin formation
2) fibrosis in the lungs
3) 4) cataract formation

Answer standards: 1 – 3; 2 – 2; 3 – 2.

4.1.3. Examples of test tasks for final knowledge assessment (with standard answers)
Test assignments are located in the Moodle system
Access mode: **https://educ-amursma.ru/course/view.php?id=627**
Total number of tests – 100.

1. SANITARY AND HYGIENIC CHARACTERISTICS OF LABOR FOR A PATIENT WITH THE PRESUMPTED DISEASE IS:
1) enterprise administration
2) Chief Physician of the Ministry of Emergency Situations
3) SES doctor
4) shop doctor

2. OCCUPATIONAL DISEASES WHICH DO NOT REQUIRE DEVELOPMENT LONG-TERM CONTACT WITH PRODUCTION FACTORS REQUIRED:
1) silicosis
2) occupational bronchial asthma and allergic dermatoses
3) talcosis
4) silicosis

3. OCCUPATIONAL DISEASES THAT CAN DEVELOP SEVERAL YEARS AFTER CEASED CONTACT WITH INDUSTRIAL FACTORS:

1) vibration disease
2) exogenous allergic alveolitis
3) silicosis, berylliosis
4) chronic benzene intoxication
Answers: 1-3; 2- 2; 3- 3.

4.1.4. Examples of test tasks for the interim knowledge assessment (with standard answers)
Test assignments are located in the Moodle system
Access mode: **https://educ-amursma.ru/course/view.php?id=627**
Total number of tests - 100 questions

1. THE MOST INFORMATIVE METHOD OF DUST DIAGNOSTICS BRONCHITIS IS:
1) sputum analysis;
2) bronchoscopy;
3) skin tests;
4) examination of the function of external respiration.

2. THE STATEMENTS ABOUT SILICOSIS ARE MOST CORRECT:

1) interstitial lung disease; often complicated by tuberculosis;

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2) the root lymph nodes are involved in the process;
3) often complicated by tuberculosis;
4) a common complication is cancer.

3. THE PURPOSE OF PERIODIC MEDICAL EXAMINATIONS IS:
1) identification of occupational diseases;
2) establishment of common diseases;
3) dynamic monitoring of the general condition of workers;
4) preventive treatment.

Answer standards 1-2; 2-1; 3-3.

4.1.5. Examples of test tasks for final assessment (with standard answers)

Test assignments are located in the Moodle system
Access mode: **https://educ-amursma.ru/course/view.php?id=627**
Total number of tests - 100

1. CLINICAL MANIFESTATIONS OF INTOXICATION WITH PHOSPHORUS-CONTAINING PESTICIDES 1)
laryngopharyngitis, tracheobronchitis, mydriasis
2) miosis, stomatitis
3) stomatitis, glossitis
4) bronchorrhea, miosis

2. THE MAIN DOCUMENTS REQUIRED TO DETERMINE THE ISSUE OF THE CONNECTION OF A DISEASE WITH A PROFESSION WHEN REFERRING A PATIENT TO A SPECIALISED OCCUPATIONAL PATHOLOGY INSTITUTION ARE

1) referral from an occupational pathologist indicating the purpose of the consultation, sanitary – hygienic characteristics of working conditions, copy of work book
2) a copy of the work book
3) sanitary and hygienic characteristics of working conditions
4) referral from the shop doctor

3. IN CASE OF VIBRATION DISEASE, DIFFERENTIAL DIAGNOSIS MUST BE CONDUCTED WITH DISEASES
1) Raynaud's disease, polyneuropathy, vascular diseases of the nervous system
2) syringomyelia, neuropathies of infectious genesis
3) vascular diseases of the nervous system
4) syringomyelia

Answer standards: 1-1; 2-3; 3-1.

4.2. Examples of situational tasks of current control (with sample answers)

Located in the Moodle system Access
mode: **https://educ-amursma.ru/course/view.php?id=627**
Total quantity - 50

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Task #1

B., 34 years old, a driller in a gold mine. Complaints of aching pain in the arms, more often at night, a crawling sensation and coldness of the hands, and whitening of the terminal phalanges with general cooling. Pain for 2 years, no treatment. Smoker for 14 years, 1 pack a day. Satisfactory condition. Vesicular breathing. Blood pressure 120 and 80 mm Hg. Pulse 72 beats per minute, rhythmic. The abdomen is soft, painless. The hands are pale cyanotic, cold, and damp. The fingers have the appearance of "drumsticks," and the nails are like "watch glasses." Hyperkeratosis of the palms and dorsal surface of the interphalangeal joints. There is pronounced marbling of the skin of the palms. Pain sensitivity is reduced, like high gloves. Nail bed capillaroscopy shows a spastic atonic picture of capillaries. Ultrasound Doppler imaging shows spasm of interdigital arteries of the hands. ENG: slowing of impulse conduction along the ulnar and median nerves. X-ray of the hands shows moderate osteoporosis of the distal phalanges.

Questions:

1. What research is needed to confirm the diagnosis?
2. Formulate a diagnosis.
3. Conduct an assessment of work capacity

Standard answer

Diagnosis: Vibration disease from local vibration of the 1st degree. Vegetative sensory polyneuropathy of the upper limbs with peripheral angiodystonic syndrome with rare angiospasms of the fingers.

Examination: pallesthesiometry, EMG, thermography, dynamometry.

Task #2

Patient K., 61, an engineer at the statistical department. Admitted with complaints of cough with scanty mucous sputum, chest pain on the right, of a pulling nature, increasing with deep breathing, weakness, sweating, weight loss of 2 kg over the past 2 months. He fell ill 3 months ago, when after hypothermia his temperature rose to subfebrile numbers, cough with mucous sputum and chest pain appeared. He was treated as an outpatient for pneumonia on the right, his condition improved, cough decreased, temperature returned to normal, he gained weight. Elevated ESR and slight anemia persisted. A native of the Chita region, he worked as a driller in a cobalt mine for 25 years. He has been smoking 1-2 packs of cigarettes a day for 42 years.

The patient's condition is satisfactory. Acrocyanosis. Peripheral lymph nodes are not enlarged. Percussion over the lungs reveals a pulmonary sound, dullness below the 8th rib along the scapular line on the right. Vesicular breathing, weakened under the right scapula. Blood pressure is 130/80 mm Hg, pulse is 80 per minute, rhythmic. The abdomen is soft, painless, the liver is along the edge of the costal arch.

Blood test: E-3.7*1012/l, L-9.2*109 /l, ESR-24 mm/h. CRP +++, fibrinogen-7252 mg/l. Spirometry: DN II. Chest X-ray: increased transparency of the lungs in the lower sections, deformation of the pulmonary pattern in the middle sections according to the reticular type, nodular shadows with a diameter of 2 mm in the middle sections, infiltration of lung tissue in segments 8-9 on the right.

Questions:

1. Formulate a diagnosis.
2. Highlight the syndromes.
3. Conduct a Work Capacity Assessment

Standard answer.

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Diagnosis: Peripheral (professional) cancer of segments 8-9 of the right lung. Silicosis stage 1 p2, s2, late. Emphysema. DN II.

Problem #3

Patient V., 45 years old, a carpenter-concreter, with 20 years of work experience. Admitted with complaints of paroxysmal cough with a small amount of sputum - 20 ml per day, chest pain, weakness, malaise, fever up to 37 0C, shortness of breath.

Profanamnesis: the work is associated with exposure to cement dust, dry sand, since concrete is mixed manually, the content of cement dust exceeds the MAC by 1.5 times.

From the anamnesis: sick for 2 years, was admitted to hospital three times with similar complaints.

Objectively: the condition is of moderate severity, the skin is of normal color. Auscultation reveals harsh breathing in the lungs, wheezing in all fields. Heart sounds are clear, rhythmic.

Blood test: erythrocytes: 4.6 x 1012/l, Hb: 154 g/l, CI: 1.0; L: 8.4 x 109 /l, ESR: 15 mm/hour.

Blood biochemistry: fibrinogen – 4800.

Spirography: VC: 90%, FEV in 1 sec.: 56%, IVT: 69%, MVL: 67%.

Chest X-ray: increased pulmonary markings, emphysema.

ECG: increased load on the right ventricle.

Questions:

1. What additional research methods are needed?
2. Highlight the syndromes.
3. Formulate a diagnosis.
4. Decide on the patient's ability to work.

Answers:

1. EchoCG, CT of the chest.
2. Syndromes: bronchial obstruction, increased airiness of the lung tissue, chronic pulmonary heart disease.
3. Chronic dust bronchitis. Stage 2. Pulmonary emphysema. Chronic pulmonary heart disease, subcompensation. DN 2.
4. Transfer to work not associated with industrial dust.

Examples of situational tasks of boundary control Located in the Moodle system Access mode: **https://**

educ-amursma.ru/course/view.php?id=627

Total quantity - 50

Task #1

Patient K., 36 years old. Admitted to the pulmonology department with complaints of asthma attacks accompanied by cough with a small amount of mucous sputum, chills, fever, occurring in the evening and at night. She has been ill for 3 years, notes an improvement in her condition and the disappearance of asthma attacks during vacation time. Works as a poultry farmer. Her condition is satisfactory. Slight warm cyanosis. Peripheral lymph nodes are not enlarged. Percussion sound over the lungs is pulmonary, in the lower sections there is a slight shortening of the sound. Vesicular breathing, crepitation in the lower sections. Muffled heart sounds, BP 125 and 80 mm Hg, pulse 88 per 1 min., rhythmic. The abdomen is soft and painless on palpation. Blood test: L-10.8*109 /l, e-6%, p-3%, s-78%, l-13%, ESR 29 mm/hour.

Spirometry: DN 1, restrictive type. BAL fluid contains 40% lymphocytes.

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Immunoelectrophoresis revealed precipitating antibodies to avian antigens. Radiographic examination of the lungs revealed diffuse enhancement and deformation of the pulmonary pattern due to the interstitial tissue of the lungs, small nodular consolidations in the corticobasal sections, the roots of the lungs are compacted. CT showed diffuse changes of the type
"frosted glass".

After the work at the poultry farm was stopped, the attacks of suffocation and coughing, the rise in temperature ceased, and there was a pronounced positive dynamics of the X-ray picture in the lungs. DN regressed. However, specific precipitating antibodies were still detected in the blood. Question: Formulate and justify the diagnosis.

Standard answer.

Diagnosis: chronic exogenous allergic alveolitis (hypersensitivity pneumonitis), moderate severity. DN 1.

Task #2

Patient S., 45, was admitted to hospital complaining of pain in the arms and legs, muscle weakness in them, cramping abdominal pain, and a tendency to constipation. He fell ill 2 months ago after drinking alcohol. He was treated as an outpatient without effect. A native of the Amur Region, he works as a battery mechanic in a car service center. His condition is moderate, his skin is pale. The peripheral lymph nodes are not enlarged. There is vesicular breathing in the lungs. The heart sounds are muffled, systolic murmur is at the apex of the heart, the 2nd sound is accentuated on the aorta, blood pressure is 180/100 mm Hg, pulse is 56 per minute, rhythmic. The tongue is coated with a white coating, the gums are loosened, there are many broken teeth in the oral cavity. On palpation of the abdomen, the abdominal wall is tense, when pressing on the abdomen, the pain decreases, the compacted, painful sigmoid and cecum are palpated. Hemogram: E-3.8*1012/l, Hb-110 g/l, reticulocytes 30%, ESR 25 mm per hour.

Urinalysis: color - red, specific gravity 1015, single leukocytes in the field of vision. Irrigoscopy: spastic-atonic changes in the large intestine. Muscle strength in the arms is reduced to 3 points, finger extension is difficult. Stimulation electromyography: signs of moderate block of excitation conduction along the motor fibers and terminals of the median and ulnar nerves.

Question: Formulate and justify the diagnosis.

Answer standard. Diagnosis: chronic lead intoxication, severe form, lead colic, polyneuropathy of the upper extremities.

Problem #3

Patient P., a gold mine engineer, 45 years old. Complains of cough with sputum in the morning, shortness of breath when walking.

Profanamnesis: worked as a driller in this mine for 6 years, in dry drilling conditions, the maximum permissible concentration of quartz dust was 4-6 times higher. Has been ill for the last 8 years. The cough was dry at first, then it became accompanied by sputum, and he began to catch colds more often. Has been smoking since he was 16, one pack a day.

Condition of moderate severity. Moderate cyanosis, acrocyanosis. There is a box-like sound above the lungs. Vesicular breathing, weakened in the lower sections, dry, scattered wheezing. Borders of relative cardiac dullness: the right one is 1.5 cm to the right of the right edge of the sternum, the upper one is along the 3rd rib, the left one is 1 cm inward from the midclavicular line. BP 120-80 mm Hg, PS 72 per minute. Heart sounds are muffled, the second sound is accentuated over the pulmonary artery. The liver is enlarged by 1 cm, after treatment it decreased to normal.

Blood test: Erythrocytes: 5.5 x 1012/l, Hb: 178 g/l, CI: 1.0; L: 9.2 x 109 /l, ESR: 12 mm/hour.

ECG: increased load on the right sections, hypertrophy of the left sections. Pulmonary artery pressure 42 mm Hg.

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Chest X-ray: no evidence of silicosis.
Questions:
1. What additional research methods are needed?
2. Highlight the syndromes.
3. Formulate a diagnosis.
4. Decide on the patient's ability to work.
Answers:
1. EchoCG, CT scan of the chest.
2. Syndromes: bronchial obstruction, increased airiness of the lung tissue, chronic pulmonary heart disease.
3. Chronic dust bronchitis. Stage 2. Pulmonary emphysema. Chronic pulmonary heart disease, subcompensation. DN 2.
4. Disabled, determination of disability group.

Examples of tasks for final assessment
Located in the Moodle system Access
mode: **https://educ-amursma.ru/course/view.php?id=627**
Total quantity - 10

Task No. 1

Patient G., 48 years old. Has been working as a typesetter in a printing house for 13 years. Smokes a pack of cigarettes a day. Drinks 400-500 ml of vodka 2-3 days a week. Has been bothered by weakness and occasional headaches for 2 years. Colicky abdominal pain was observed six months ago. He was hospitalized in the surgical department with a presumptive diagnosis of acute abdomen. Surgery was not performed. The pain stopped after a few days. Over the past month, his condition has worsened: weakness has increased, shortness of breath has appeared. Objectively: pale skin. Pulse is 72 beats per minute. Blood pressure is 150 and 85 mm Hg. Liver size according to Kurlov is 9-9-8 cm. The spleen is not enlarged. The abdomen is soft and painless on palpation. Blood test: hemoglobin 85 g/l, some red blood cells with basophilic granularity, leukocytes 8.0 x 109 /l, leukocyte formula unchanged. Albumins - 4.5 g/l, ASAT - 58 IU, ALAT - 120 IU. Urine analysis is unchanged. ECG: decreased T wave amplitude in the chest leads. Consultation with a neurologist: peripheral polyneuropathy.

Questions:
1. Probable diagnosis
2. What studies are advisable to conduct to clarify the diagnosis?
3. What are the possible causes of hypochromic anemia in the patient?
4. What drug can be used to treat the disease?
Answers:
1. Lead poisoning.
2. Determination of the level of alpha-aminolevulinic acid in the blood and coproporphyrin in urine.
3. Decreased hemoglobin synthesis as a result of disruption of porphyrin metabolism.
4. D-penicillamine.

Problem #2

Patient K., 36 years old, poultry farmer, 13 years of experience working at a poultry farm. Over the past 3 years, after working with chickens, attacks of suffocation occurred in the evening or at night, accompanied by a cough with scanty sputum, an increase in temperature to 39 C, chills and headache. An X-ray examination of the lungs revealed

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diffuse enhancement and deformation of the pulmonary pattern due to compaction of the lung tissue. During physical examination, crepitation was heard in the basal sections. The study of the external respiratory function revealed: VC - 56% of the expected value, signs of obstruction at the level of small bronchi. Immunological research revealed precipitating antibodies to avian antigens in the blood serum.

Questions:

1. Presumptive diagnosis.
2. A similar clinical and radiological picture of lung damage can occur with occupational bronchial asthma or alveolitis.
3. What is the nature of the morphological changes?
4. What principles of therapy should be

Answers:

1. Exogenous allergic alveolitis.
2. Idiopathic fibrosing alveolitis.
3. Signs of productive alveolitis with lymphohistiocytic infiltration of the pulmonary interstitium.
4. Termination of professional contact with the possible initiator of the disease, inhalation therapy with steroids, bronchodilators during the period of suffocation.

Problem #3

Patient M., 19, periodically had contact with various organic solvents (benzene). After 8-9 months, weakness, rapid fatigue, poor appetite, frequent nosebleeds, and easily occurring "bruises" appeared. Examination revealed: pale skin and mucous membranes, a small number of "bruises" of varying age on the trunk and limbs. The "pinch" symptom is sharply expressed. Vesicular breathing in the lungs, no wheezing. Blood pressure 120 and 70 mm Hg. The liver size is not enlarged, the length of the spleen is 10 cm. ECG revealed mild myocardial changes. Blood analysis: Hb - 72 g/l, Er - 1.87 x 1012/l, L - 1.45 x 109 /l (s/c - 8.5%, p/c - 12.5%, lymph. - 69%, mon. - 7.5%), reticulocytes - 50/00, Tr - 82 x 109 /l, ESR - 81 mm/hour. Anisocytosis, poikilocytosis. Sternal puncture: picture of a pronounced hypoplastic process affecting all three bone marrow sprouts, without signs of blastosis.

Questions:

1. What is the main mechanism of hematopoiesis disorder?
2. What changes are associated with the impact of production factors?
3. Which organs are most often affected?
4. Possible complications in this case include?

Answers:

1. Effect on mitosis and chromosomal apparatus of bone marrow stem cells.
2. Iron deficiency anemia, bone marrow damage.
3. Bone marrow.
4. Disruption of the ovarian-menstrual cycle, acute leukemia.

4.3. List of practical skills that a student should have after mastering the discipline

1. Diagnose occupational diseases taking into account the occupational route, sanitary and hygienic characteristics of working conditions and clinical and laboratory examination of patients taking into account the norm.

2. Conduct basic instrumental diagnostic examination methods (cold test, Pahl test, capillaroscopy, assessment of vibration and pain

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sensitivity, and evaluate additional research methods (spirometry, radiography, ultrasound Doppler, etc.) used during periodic medical examinations.

3. Make a plan for the implementation of measures required when hiring for a production facility where there are occupational hazards. 4. Be able to diagnose pneumoconiosis, dust bronchitis, vibration disease, lead poisoning, benzene, pesticides.

5. Conduct an examination of working capacity for pneumoconiosis, dust bronchitis, vibration disease, lead poisoning, benzene, pesticides.

6. Prescribe a plan of preventive measures for vibration disease, pneumoconiosis, saturnism, occupational bronchitis, benzene poisoning, pesticides.

7. Prepare a medical history for the student.

8. Compile a professional anamnesis

9. Draw up a plan of rehabilitation and preventive measures for occupational diseases.

10. Have skills in working with orders of the Ministry of Health of the Russian Federation No. 29 n dated 01/28/2021,

4.4. List of questions for the test

1. Objectives and methods of conducting preventive medical examinations of students of general and vocational education organizations before and during their internship in organizations whose employees are subject to medical examinations.

2. Documents required for diagnostics of PZ

3. The role of professional history in the diagnosis of occupational diseases, assessment of the impact of professional factors on human reproduction.

4. Pneumoconiosis, pathogenesis, classification, clinical presentation, diagnostics, treatment.

5. Differential diagnosis of pneumoconiosis with tuberculosis, sarcoidosis, carcinomatosis

6. Chronic occupational bronchitis, etiology, pathogenesis, clinical features, treatment, prevention.

7. Occupational bronchial asthma, etiology, pathogenesis, clinical features, treatment, prevention.

8. Basic principles of diagnostics of occupational diseases.

9. Vibration disease, etiopathogenesis, classification, clinical manifestations, preventive measures.

10. Differential diagnosis of vibration disease with Raynaud's syndrome, scleroderma

11. Intoxication with organic solvents, etiology, pathogenesis, clinical features, treatment, examination of working capacity

12. The influence of organic solvents on the human reproductive system.

13. Chronic lead intoxication, etiology, pathogenesis, classification, impact on human reproduction, fetus and offspring.

14. Poisoning with mercury, chlorine and organophosphorus pesticides, clinical picture, diagnostics, treatment, emergency care.

15. Inorganic mercury poisoning.

16. The impact of unfavorable production factors on the human reproductive system, fetus and child, types of reproductive disorders in humans.

APPROVED
at a meeting of the Department
of Hospital Therapy with a Course in Pharmacology
named after Professor Yu. S. Landyshev

Minutes No. 8 of May 8, 2026

Head of Department V. V. Voitsekhovsky

ADDITIONS AND AMENDMENTS TO THE WORK PROGRAM FOR THE DISCIPLINE: «OCCUPATIONAL DISEASES» SPECIALTY 31.05.01 GENERAL MEDICAL CARE FOR THE 2026-2027 ACADEMIC YEAR

The tables in Section 3.5. "Licensed and Freely Distributed Software Used in the Educational Process" and "Professional Databases, Information and Reference Systems, and Electronic Educational Resources" shall be amended as follows:

1. List of software (commercial software products)

№ п/п	List of software (commercial software products)	Details of supporting documents
1.	MS Windows 7 Pro operating system	License number 48381779
2.	Operating system: MS Windows 10 Pro	AGREEMENT No. UT-368 dated 09.21.2021
3.	MS Office	License number: 43234783, 67810502, 67580703, 64399692, 62795141, 61350919
4.	Kaspersky Endpoint Security для бизнеса – Стандартный Russian Edi-tion. 50-99 Node 1-year Educational Renewal License	Agreement No. 7 AA от 07.02.2025
5.	1C Accounting and 1C Salary	LICENSE AGREEMENT 612/L dated 02.02.2022 (additional licenses)
6.	1C: PROF University	LICENSE AGREEMENT No. KrTsB-004537 dated December 19, 2023
7.	1C: PROF Library	LICENSE AGREEMENT No. 2281 dated November 11, 2020
8.	Consultant Plus	Contract № 41AA от 27.12.2024
9.	Kontur.Tolk	Contract № K213753/24 от 13.08.2024
10.	3KL e-learning environment (Russian Moodle)	Contract № 1362.5 от 20.11.2024
11.	Astra Linux Common Edition	Contract № 142 A от 21.09.2021
12.	Information system "Plans"	Contract № 2873-24 от 28.06.2024
13.	1C: Document Management	Contract № 2191 от 15.10.2020
14.	P7-Office	Contract № 2 KC от 18.12.2020
15.	License for the "ROSA CHROME OS Workstation"	Contract № 88A от 22.08.2024
16.	Alt Virtualization Server 10 (for secondary and higher vocational education)	Contract № 14AK от 27.09.2024
17.	Dr.Web Desktop Security Suite Comprehensive protection + Control Center for 12 months.	Contract № 8 от 21.10.2024
18.	"Schedule for Educational Institutions" software	Contract № 82A от 30.07.2024

List of freely distributed software

№ п/п	List of freely distributed software	Links to the license agreement

1.	Yandex Browser	Freely distributed License Agreement for the use of Yandex Browser software https://yandex.ru/legal/browser_agreement/
2.	Yandex.Telemost	Freely distributed Software License Agreement https://yandex.ru/legal/telemost_mobile_agreement/
3.	Dr.Web CureIt!	Freely distributed Software License Agreement https://st.drweb.com/static/new-www/files/license_CureIt_ru.pdf
4.	OpenOffice	Freely distributed License: http://www.gnu.org/copyleft/lesser.html
5.	LibreOffice	Freely distributed License: https://ru.libreoffice.org/about-us/license/
6.	VK Calls	Freely distributed https://vk.com/licence
7.	Kaspersky Free Antivirus	Freely distributed https://products.s.kaspersky-labs.com/homeuser/Kaspersky4Win2021/21.16.6.467/english-0.207.0/3830343439337c44454c7c4e554c4c/kis_eula_en-in.txt

Professional databases, information and reference systems, electronic educational resources

Resource name	Resource description	Access	Resource address
Electronic library systems			
Student Consultant. Medical University Electronic Library	For students and faculty of medical and pharmaceutical universities. Provides access to electronic versions of textbooks, teaching aids, and periodicals.	Remote access after registration under the university profile	https://www.studentlibrary.ru/
Reference and information system «MedBaseGeotar».	Reference and information system «MedBaseGeotar». The program is designed for practicing medical specialists, researchers, teachers, postgraduate students, residents, senior students, and healthcare managers to quickly search, select, and read the medical literature they need for their work in a single data source.	Remote access after registration under the university profile	https://mbasegeotar.ru/pages/index.html
ELS «Bookup»	A large medical library is an information and educational platform for the shared use of electronic educational and methodological publications from medical universities in Russia and the CIS countries.	Remote access after registration under the university profile	https://www.books-up.ru/
ELS «Doe»	The Network Electronic Library of Medical Universities is an electronic database of educational and scientific works on medical topics, created for the purpose of implementing network forms of professional educational programs, open access to educational materials for partner universities.	Remote access after registration under the university profile	https://e.lanbook.com/
Scientific Electronic Library "CyberLeninka"	CyberLeninka is a scientific electronic library built on the Open Science paradigm. Its primary goals are the popularization of science and scientific activity, public oversight of the quality of scientific publications, the	free access	https://cyberleninka.ru/

	development of interdisciplinary research, a modern institution of scientific review, increasing the citation rate of Russian science, and building a knowledge infrastructure. It contains over 2.3 million scientific articles.		
Human Biology Knowledge Base	Reference information on physiology, cell biology, genetics, biochemistry, immunology, and pathology. (Source: Institute of Molecular Genetics, Russian Academy of Sciences.)	free access	http://humbio.ru/
State Register of Medicines	The State Register of Medicines website contains information about medications: indications, contraindications, mechanism of action, side effects, dosages, and methods of administration.	free access	https://grls.rosminzdrav.ru/GRLS.aspx
Information systems			
Clinical Guidelines Index	A resource of the Russian Ministry of Health that contains clinical guidelines developed and approved by medical professional non-profit organizations of the Russian Federation, as well as methodological manuals, nomenclatures, and other reference materials.	Link to download the application	https://cr.minzdrav.gov.ru/#!/
Federal Electronic Medical Library (FEMB)	The Federal Electronic Medical Library is part of the Unified State Healthcare Information System as a reference system. The FEML was created using the collections of the I.M. Sechenov Central Scientific Medical Library.	free access	https://femb.ru/
Russian State Library (RSL)	Collection size: approximately 3 million titles Period covered: from the 11th century to the present The Russian State Library's Digital Library is a collection of electronic copies of valuable and frequently requested publications from the Russian State Library's collections, external sources, and documents originally created in electronic form.	Registration on the website	https://www.rsl.ru/
Russian Medical Association	A professional online resource. Purpose: to promote effective professional activity among medical personnel. Contains the charter, personnel, structure, membership rules, and information about the Russian Medical Union.	free access	http://www.rmass.ru/
Web- medicine	The website provides a directory of professional medical resources, including links to the most authoritative specialized websites, journals, societies, as well as useful	free access	http: //webmed.irkutsk.ru/

	documents and programs. It is intended for physicians, students, and staff of medical universities and research institutions.		
Databases			
World Health Organization	The site contains news, statistics on countries that are members of the World Health Organization, fact sheets, reports, WHO publications and much more.	free access	http://www.who.int/ru/
Ministry of Science and Higher Education of the Russian Federation	The website of the Ministry of Science and Higher Education of the Russian Federation contains news, newsletters, reports, publications, and much more.	free access	http://www.minobrnauki.gov.ru
Ministry of Science and Higher Education of the Russian Federation	The website of the Ministry of Education of the Russian Federation contains news, newsletters, reports, publications, and much more.	free access	https://edu.gov.ru/
Polpred.com	Electronic Library System Business Media Media Review	free access	https://polpred.com/news
Библиографические базы данных			
Russian Medicine Database	Created at the Central Scientific and Methodological Library, it covers the entire collection since 1988. The database contains bibliographic descriptions of articles from Russian journals and collections, dissertations and their abstracts, as well as Russian and foreign books, institute proceedings, conference materials, etc. Thematically, the database covers all areas of medicine and related fields of biology, biophysics, biochemistry, psychology, etc.	free access	https://rucml.ru/
PubMed	A text database of medical and biological publications in English. PubMed is an electronic search engine with free access to 30 million publications from 4,800 indexed medical journals. The database contains articles published from 1960 to the present, including information from MEDLINE, PreMEDLINE, and NLM. Each year, the portal is updated with more than 500,000 new papers.	free access	https://pubmed.ncbi.nlm.nih.gov/
eLIBRARY.RU	A Russian information portal in science, technology, medicine, and education, containing abstracts and full texts of over 13 million scientific articles and publications. The eLIBRARY.RU platform offers electronic versions of over 2,000 Russian scientific and technical	Full functionality of the site is available after registration.	http://elibrary.ru/defaultx.asp

	journals, including over 1,000 open-access journals.		
Electronic Dissertation Library (RSL)	Currently, the Electronic Library of Dissertations of the Russian State Library contains more than 919,000 full texts of dissertations and abstracts.	free access	http://diss.rsl.ru/?menu=disscatalog/
Medline.ru	Medical and biological portal for specialists. Biomedical journal.	free access	https://journal.scbmt.ru/jour/index
Official Internet portal of legal information	The single official state information and legal resource in Russia	free access	http://pravo.gov.ru/

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