


**PRIVATE HIGHER EDUCATIONAL INSTITUTION
"INTERNATIONAL ACADEMY OF ECOLOGY AND MEDICINE"
Department of social medicine and humanitarian disciplines**

"APPROVED"

Head of Department

 Lyudmila DUDARENKO

"31" August 2022

WORKING PROGRAM OF EDUCATIONAL DISCIPLINE

" Labor protection in the industry "

LEVEL OF HIGHER EDUCATION Second (master's) level

DEGREE OF HIGHER EDUCATION Master's degree

BRANCH OF KNOWLEDGE 22 Healthcare

SPECIALTY 221 Dentistry

Reviewed and approved
at the meeting of the department of social medicine and
humanitarian disciplines
Protocol No. 1 dated August 31 , 2022

Kyiv 2022

Working program of educational discipline “**Labor protection in the industry**” for the training of applicants for a second (master's) higher education level of higher education in specialty 221 Dentistry.

Developer : senior teacher of the department Namyatov O.V.

Agreed

The first vice-rector



Oleksandra SOROKA

Introduction

The program on the educational discipline " Labor protection in the industry" is compiled in accordance with the educational and professional program for training specialists of the second (master's) level of specialty 221 Dentistry , field of knowledge 22 Health care, the Law of Ukraine "On Higher Education" dated July 1, 2014 No. 1556- VII (Article 13, Clause 7), the provision "On the organization of the educational process at the International Academy of Ecology and Medicine", methodological recommendations approved by the Central Methodical Office of Higher Medical Education of the Ministry of Health of Ukraine regarding the development of programs of educational disciplines in accordance to industry standards of higher education. The discipline "Occupational safety in the industry" belongs to the Professional training section of the training plan for students of higher education of the second educational (master's) level.

Description of the academic discipline

Name of indicators	Field of knowledge, specialty. level of higher education	Characteristics of the academic discipline
		full-time education
The number of credits is 3.0	Branch of knowledge: 22 Healthcare	
Sections - 1	Specialty: 221 Dentistry	Year of preparation:
There are 2 content sections		1st
		Semester
The total number of hours is 90		1st
		Lectures
	Educational level: master	10 hours
		Practical
		20 hours
		Independent (individual) work
		60 hours
		Type of control: current and final control

The subject of study of the academic discipline is study of the system of legal, socio-economic, organizational-technical, sanitary-hygienic and medical-prophylactic measures and means aimed at preserving life, health and working capacity of a person in the process of work.

1. The purpose and tasks of the educational discipline:

1.1. The purpose of teaching the academic discipline "Occupational safety in the industry":

- formation of future specialists' knowledge, skills and competencies to ensure effective management of labor protection in the medical field;
- formation of future specialists' knowledge, skills and competencies to create favorable conditions for the production environment and labor safety in the industry in accordance with current legislative and other regulatory acts.

1.2. The main objectives of studying the discipline " Labor protection in the industry" are:

ensuring the preservation of life, health and working capacity of medical workers in industrial conditions by applying a complex of legislative, organizational, engineering-technical, sanitary-hygienic, medical-prophylactic and other measures aimed at the prevention of industrial injuries and the occurrence of occupational and production-related diseases.

1.3 . Competences and learning outcomes, the formation of which helps discipline " Labor protection in the industry " .

According to with the requirements of the Higher Education Standard of the " Labor protection in the industry" discipline ensures that students acquire the following *competencies*:

Know:

- The influence of environmental factors on the general health of the population.
- The influence of the factors of the industrial environment on the health and life of medical workers.
- A complex of legislative, organizational, engineering-technical, sanitary-hygienic, medical-prophylactic and other measures aimed at the prevention of industrial injuries and the occurrence of occupational and production-related diseases.

Be able to:

- ✓ Draw conclusions about the presence of factors that have a negative impact on the medical worker during his professional activity.
- ✓ Explain the requirements for ensuring the safe professional activity of a doctor in modern conditions.
- ✓ Interpret key issues of legislative acts and regulatory documents on the safety of the professional activity of a medical worker.
- ✓ To draw conclusions about the presence of harmful factors influencing the medical worker during the performance of his professional duties.
- ✓ To explain the requirements for ensuring occupational health and safety of medical personnel in modern conditions.

1.4. Learning outcomes (list of mandatory skills for future practice):

1. Apply the requirements of legislative and regulatory documents for the implementation of methods and means of the system of labor protection of workers in medical institutions.
2. Apply the basic forms of organization and management of labor protection of medical workers.
3. Identify harmful and dangerous factors of the production environment at the workplace of medical workers and give them a hygienic assessment.
4. Give an assessment of the organization of the workplace, medical equipment in the hospital.
5. Predict the possibility of occupational, production-related diseases, accidents, emergency situations.
6. Investigate and record accidents, acute and chronic occupational diseases, and injuries in the medical field.
7. Develop occupational health and safety instructions for medical workers.
8. Conduct training and testing knowledge on labor protection.

2. Information volume of the academic discipline.

90 hours of 3.0 ECTS credits are allocated to the study of the academic discipline, including lectures 10 hours, practical 20 hours, independent work 60 hours. Normative discipline.

Chapter 1. Labor protection in the industry

Content section 1 . General issues of labor protection.

Topic 1 . LEGAL and organizational foundations of labor protection.

Content section 2. Special issues of labor protection in the medical field.

Topic 2 . Hygienic characteristics of working conditions of medical workers.

Topic 3. Accidents and accidents at the LPZ, their investigation and accounting.

Topic 4 . Hygiene and labor protection in medical institutions.

Topic 5 . Basics of industrial safety of medical workers.

3. THE structure of the educational discipline

No	The names of topics	Number of hours			
		Full-time			
		In total	l.	p.	s.s.
1.	Legal and organizational foundations of labor protection	16	2	4	10
2.	Hygienic characteristics of working conditions of medical workers	16	2	4	10
3.	Accidents and accidents in public transport, their investigation and accounting	16	2	4	10
4.	Hygiene and labor protection in medical institutions	16	2	4	10
5.	Basics of industrial safety of medical workers	14	2	2	10
	Test	12	-	2	10
	In total	90	10	20	60

4. Thematic plan of lectures

No	Topic	Number of hours
1.	Legal and organizational foundations of labor protection	2
2.	Hygienic characteristics of working conditions of medical workers	2
3.	Accidents and accidents at the LPZ, their investigation and accounting	2
4.	Hygiene and labor protection in medical institutions	2
5.	Basics of industrial safety of medical workers	2

	In total	10
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5. Thematic plan seminar classes

	Topic	Number of hours
1.	Legal and organizational foundations of labor protection	4
2.	Hygienic characteristics of working conditions of medical workers	4
3.	Accidents and accidents at the LPZ, their investigation and accounting	4
4.	Hygiene and labor protection in medical institutions	4
5.	Basics of industrial safety of medical workers	2
	Test	2
	In total :	20

6. Thematic plan of students ' independent work

No s/p	Topic	Number of hours
1.	Legal and organizational foundations of labor protection	10
2.	Hygienic characteristics of working conditions of medical workers	10
3.	Accidents and accidents in public transport, their investigation and accounting	10
4.	Hygiene and labor protection in medical institutions	10
5.	Basics of industrial safety of medical workers	10
	Test	10
	In total :	60

7. A list of theoretical questions for preparing students for the final examination

1. Legislative and regulatory framework of Ukraine on labor protection. Liability for violation of labor protection legislation.
2. State administration of labor protection and organization of labor protection in production. Labor protection service of the Ministry of Health of Ukraine. Labor protection service of the enterprise.
3. Training on labor protection issues. Briefings on labor protection issues.
4. State supervision and public control over labor protection.
5. Investigation and accounting of accidents, occupational diseases and accidents at work.
6. List of occupational hazards in the performance of professional duties of medical and pharmaceutical workers.
7. Rules of industrial sanitation, anti-epidemic regime and personal hygiene of employees of disinfection facilities and units.
8. Safety techniques for the staff of offices and departments of radiation diagnostics and therapy. Peculiarities of influence of modern laser devices.
9. Occupational health and safety in patho-anatomical, patho-histological, and forensic institutions.
10. Safety rules in hyperbaric oxygenation departments, clinical diagnostic laboratories, physiotherapy departments, when working with sterilization facilities.
11. Rules of equipment, operation and industrial sanitation in pharmacies.
12. The concept of the meaning of HIV infection and AIDS in the practice of a doctor. Possible routes of entry of biological material from an HIV-infected person to the body of a medical worker.
13. Concept of "industrial accident" and subsequent measures. Antiretroviral program.
14. Prevention of infection and immunoprophylaxis when a doctor comes into contact with biological materials of a patient with viral hepatitis.
15. Ensuring the safety and quality of donor blood in the field of combating HIV infection/AIDS and other socially dangerous diseases.

List of practical skills for final control

1. Apply the requirements of legislative and regulatory documents for the implementation of methods and means of the system of labor protection of workers in medical institutions.
2. Apply the basic forms of organization and management of labor protection of medical workers.
3. Identify harmful and dangerous factors of the production environment at the workplace of medical workers and give them a hygienic assessment.
4. Give an assessment of the organization of the workplace, medical equipment in the hospital.
5. Predict the possibility of occupational, production-related diseases, accidents, emergency situations.
6. Investigate and record accidents, acute and chronic occupational diseases, and injuries in the medical field.
7. Develop occupational health and safety instructions for medical workers.
8. Conduct training and testing knowledge on labor protection.

8. Teaching methods

1. **Verbal** (lecture, explanation, story, conversation, instruction);
2. **Visual** (observation, illustration, demonstration);
3. **Practical** (various types of exercises, performing graphic works, carrying out an experiment, practice).

The following teaching methods are also used during the educational process:

- **explanatory-illustrative** or **information-receptive** , which involves the presentation of ready-made information by the teacher and its assimilation by students;
 - verbal methods: the source of knowledge is the spoken or printed word (story, conversation, instruction, etc.)
 - practical methods: students acquire knowledge and skills by performing practical actions (exercise, training, self-management).
- **reproductive** , (reproduction - reproduction) which is based on the performance of various tasks according to the model;
- **method of problem presentation**, which consisted in the fact that the teacher poses a problem and solves it himself, demonstrating the contradictions that characterize the learning process, while the students' task is to control the sequence of presentation of the material, the significance of the evidence, predicting the teacher's next steps; this MN is implemented by training students in problem situations with the aim of successful preliminary preparation for future work in real conditions of practical medical institutions;
- **partially search** or **heuristic** , aimed at mastering individual elements of search activity, for example: the teacher formulates a problem, students - a hypothesis;
- **research** , the essence of which is the teacher's organization of creative research activities of students by posing new problems and problematic tasks.
- methods that ensure **perception and assimilation** of knowledge by students (lectures, independent work, instruction, consultation);
- **methods of applying knowledge and acquiring and consolidating abilities and skills** (practical classes, control tasks);
- **methods of checking and evaluating knowledge, abilities and skills** ;
- **visual methods**: the source of knowledge is observed objects, phenomena, visual examples
- **discussion methods** .

9. Control methods

9.1. Current control is carried out on the basis of control of theoretical knowledge, skills and abilities in practical classes. The student's independent work is evaluated in practical classes and is a component of the student's final grade. Current control is carried out during training sessions and is aimed at checking students' assimilation of educational material. Forms of current control are:

- a) test tasks with the choice of one correct answer, with the definition of the correct sequence of actions, with the definition of correspondence;
- b) individual oral survey, interview;
- c) solving typical situational problems;
- d) control of practical skills.

9.2. The form of the final control of study success

The final control (credit) is conducted at the last control session.

Students who have attended all the classroom training sessions provided by the curriculum for the discipline and when studying the section are admitted to the PC. A student who, for good or no good reasons, missed classes, is allowed to work off the academic debt by a certain specified deadline.

Forms of final control should be standardized and include control of theoretical and practical training.

10. Scheme of accrual and distribution of points received by students of higher education.

The form of the final control of which is the offset .

Assessment of current educational activities. During the assessment of mastery of each topic for the current educational activity, the student is given grades on a four-point (traditional) grading scale. At the same time, all types of work provided for by the discipline program are taken into account. The student must receive a grade for each topic (at each practical training session). Estimates given on a traditional scale are converted into points. The final grade for the current educational activity is recognized as an arithmetic average (the sum of grades for each class is divided by the number of classes in the semester) and is converted into points according to the **Table**.

Table. Recalculation of the average grade for the current activity into a multi-point scale (for disciplines ending with credit)

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	200	4.47	179	3.94	158	3.42	137
4.97	199	4.45	178	3.92	157	3,4	136
4.95	198	4.42	177	3.89	156	3.37	135
4.92	197	4.4	176	3.87	155	3.35	134
4.9	196	4.37	175	3.84	154	3.32	133
4.87	195	4.35	174	3.82	153	3.3	132
4.85	194	4.32	173	3.79	152	3.27	131
4.82	193	4.3	172	3.77	151	3.25	130
4.8	192	4.27	171	3.74	150	3.22	129
4.77	191	4.24	170	3.72	149	3.2	128
4.75	190	4.22	169	3.7	148	3.17	127
4.72	189	4.19	168	3.67	147	3.15	126
4.7	188	4.17	167	3.65	146	3.12	125
4.67	187	4.14	166	3.62	145	3.1	124
4.65	186	4.12	165	3.6	144	3.07	123
4.62	185	4.09	164	3.57	143	3.05	122
4.6	184	4.07	163	3.55	142	3.02	121
4.57	183	4.04	162	3.52	141	3	120
4.55	182	4.02	161	3.5	140	Less than 3	Not enough
4.52	181	3.99	160	3.47	139		
4.5	180	3.97	159	3.45	138		

The maximum number of points that a student can score is **200** points, **the minimum number of points is 120** points.

Criteria for setting the assessment according to the traditional 4-point and ECTS scale for taking the exam :

Score in points	Rating by national scale	Rating according to the ECTS scale
180-200	Perfectly	A
160 -179	Fine	B
150-159		C
130 -149	Satisfactorily	D
120 -129		E
50 - 119	Unsatisfactorily	FX
0-49		F

Evaluation criteria.

During the evaluation of the mastery of each topic for the current educational activity, the higher education applicant is given grades according to the national (traditional) scale, taking into account the approved evaluation criteria:

- *grade "excellent" (5)* - the student flawlessly mastered the theoretical material of the topic of the lesson, demonstrates deep and comprehensive knowledge of the relevant topic, the main provisions of scientific primary sources and recommended literature, thinks logically and constructs an answer, freely uses the acquired theoretical knowledge when analyzing practical material, expresses his attitude to certain problems, demonstrates a high level of assimilation of practical skills;
- *grade "good" (4)* - the student has mastered the theoretical material of the lesson well, has the main aspects from primary sources and recommended literature, presents it with arguments; possesses practical skills, expresses his thoughts on certain problems, but certain inaccuracies and errors are assumed in the logic of the presentation of theoretical content or in the performance of practical skills;
- *rating "satisfactory" (3)* - the student has basically mastered the theoretical knowledge of the subject, orients himself in primary sources and recommended literature, but answers unconvincingly, confuses concepts, additional questions cause the student uncertainty or lack of stable knowledge; when answering questions of a practical nature, reveals inaccuracies in knowledge, does not know how to evaluate facts and phenomena, connect them with future activities, makes mistakes when performing practical skills;
- *rating "unsatisfactory" (2)* - the student has not mastered the educational material of the topic, does not know scientific facts, definitions, hardly orients himself in primary sources and recommended literature, lacks scientific thinking, practical skills are not formed.

11 . Methodological support

1. Working curriculum in the discipline.
2. Calendar and thematic plans of lectures and practical classes.
- 3 . Sample test tasks for classes.
4. Test tasks for credit.
5. Educational and visual aids, technical teaching aids, etc.
6. Outlines of lectures on the discipline.
7. Computer tests for each topic and on PMK to determine residual knowledge of the discipline.
8. Individual tasks for students within the curriculum.
9. Control questions for classes.
10. Questions to PMK.
11. Methodical materials that ensure independent work of students.
12. Computer slides by topic.
13. Other materials (posters, albums, etc.).

Individual tasks

1. Medical examinations of employees of the hospital.
2. The list of establishments (subdivisions) of the health and medical facilities and positions, work in which gives the right to increase salaries (rates) in connection with harmful and difficult working conditions.
3. Resolution of the Cabinet of Ministers of Ukraine dated November 30, 2011 No. 1232 "Procedure for conducting investigations and keeping records of accidents, occupational diseases and accidents at work."
4. Special investigation of a group accident.
5. Forms of notifications and acts about an accident related to production.
6. Law of Ukraine "On mandatory state insurance against accidents at work and occupational diseases that caused the loss of working capacity" No. 1105-XIV of September 23, 1999, as amended.
7. Law of Ukraine "On objects of increased danger" No. 2245-III of January 18, 2001
8. Collective and labor contracts as a reflection of labor protection legislation.
9. Registration and accounting of occupational diseases.
10. Organization of labor protection training.
11. Safety and fire safety rules when working in medical and preventive facilities.
12. Scheme of implementation of administrative control over occupational health and safety measures in a medical and preventive institution.
13. Safety equipment in the operating room.
14. Prevention of fires and explosions in oil refineries.
15. Rules of the sanitary and anti-epidemic regime and safety techniques when working in anti-tuberculosis institutions of the M03 system of Ukraine.
16. Individual means of protection of medical workers of some specialties related to factors of occupational hazards.

12 . Recommended Books

1. Basic literature

1. Constitution of Ukraine (2020).
2. Law of Ukraine "On Labor Protection" dated 14.10.92 with amendments dated 21.11.02.
3. Life safety: Education. manual / Edited by Е.Р. Желибо - Lviv: Novy svit, 2019. - 289 p.
4. Fundamentals of the legislation of Ukraine on health care // Bulletin of the Verkhovna Rada of Ukraine. - 1993. - No. 4.
5. Code of Labor Laws of Ukraine.
6. V.S. Tarasyuk, G.B. Kuchanska Occupational health and safety in medical and preventive institutions. / Textbook for students of higher medical (pharmaceutical) educational institutions of I-IY accreditation levels. - K.: VSV "Medicine" 2018. - 184 p.
7. O.V. Namyatov A set of educational and methodological materials on the discipline "Labor protection in industry". - K., PHEE "International Academy of Ecology and Medicine", department of social medicine and preventive medicine, 2020.

2. Supporting literature

1. Law of Ukraine "On Ensuring Sanitary and Epidemic Welfare of the Population" No. 4004-XI of 24.02.94.
2. Law of Ukraine "On Collective Agreements and Agreements" No. 1874 of 12/24/95.
3. The Law of Ukraine "On Insurance Tariffs for Mandatory State Social Insurance for Accidents at Work and Occupational Diseases That Caused Loss of Working Capacity" No. 1423 dated September 13, 2000.
4. Decree of the President of Ukraine No. 643/2001 "National Program for Combating Tuberculosis."
5. Resolution of the Cabinet of Ministers of Ukraine dated October 26, 2001 No. 1403 "On approval of the Program for the Development of Blood Donation and its Components for 2002-2007".
6. Resolution of the Cabinet of Ministers of Ukraine dated January 10, 2002 No. 14 "On the approval of the Intersectoral Comprehensive Program "Health of the Nation" for 2002-2011."
7. Resolution of the Cabinet of Ministers of Ukraine dated 11.07.2001 No. 790 "HIV infection prevention program in Ukraine".
8. Resolution of the Cabinet of Ministers of Ukraine "Procedure for investigating and keeping records of accidents, occupational diseases and accidents at work" No. 1112 dated 08.25.04.
9. Order of the State Health and Labor Inspectorate of Ukraine "Standard provision on the procedure for conducting training and testing knowledge on labor health issues" No. 15 dated 26.01.05.
10. Order of the State Labor Inspectorate of Ukraine "List of works with increased danger" No. 15 dated 26.01.05.
11. Order of the State Labor Inspectorate of Ukraine "Standard Regulations on Labor Protection Service" No. 255 dated 11/15/04.
12. Order of the Ministry of Education and Culture of Ukraine "Regulations on the organization of occupational health and safety of participants in the educational process in institutions and educational institutions" No. 563 dated 01.08.01.
13. Order of the Ministry of Labor and Social Policy of Ukraine "On approval of the form of an employment contract between employees and a natural person and the procedure for registering an employment contract between employees and a natural person" No. 260 dated 08.06.01.
14. Regulations on the occupational health and safety service of the Ministry of Health of Ukraine "On the introduction of operational control over the state of occupational health and safety in institutions, establishments and enterprises of the Ministry of Health of Ukraine".
15. NAOP 9.1.50 - 1.02 - 59 "Rules on sanitation when working in anti-tuberculosis institutions of the Ministry of Health of the USSR."
16. NAOP 9.1.50 - 1.04 - 64 "Rules for the equipment and operation of the premises of

- pathology departments and morgues (pathohistological and forensic histological laboratories) of medical and preventive and forensic medical institutions, institutes and educational institutions."
- 17.NAOP 9.1.50 - 1.06 - 70 (NPAOP 85.11 - 1.06 - 70) "Rules for equipment, operation and safety techniques of physiotherapy departments (offices)".
 - 18.NAOP 9.1.50 - 1.07 - 76 "Rules for equipment, operation and industrial sanitation when working in pharmacies."
 - 19.NAOP 9.1.50 - 1.08 - 79 (NPAOP 85.14 - 1.08 - 79) "Rules on occupational safety of disinfection workers and maintenance of disinfection stations, disinfection departments, preventive disinfection departments of sanitary-epidemiological stations, individual disinfection installations",
 - 20.NAOP 9.1.50 - 1.09 - 81 (NPAOP 85.14 - 1.09 - 81) "Rules of construction, safety techniques, industrial sanitation, anti-epidemic regime and personal hygiene when working in laboratories (departments, departments) of the sanitary and epidemiological system of the USSR Ministry of Health".
 - 21.NAOP 9.1.50 - 1.10 - 84 (NPAOP 85.11 - 1.10 - 84) "Safety rules for the operation of medical equipment in health care institutions. General requirements".
 - 22.NAOP9A.50- 1.12 - 83 (SanPyN 2956a-83) (NPAOP 85.13 - 1.12 - 83) "Sanitary rules for the device, equipment, operation of outpatient and polyclinic institutions of the stomatological profile, occupational safety and personal hygiene of personnel."
 - 23.NAOP 9.1.50 - 1.13 - 59 (NPAOP 85.11 - 1.13 - 59) "Rules for the equipment and operation of infectious diseases institutions (infectious diseases departments, wards), as well as occupational health and safety of the personnel of these institutions."
 - 24.NAOP 9.1.50 - 1.15 - 69 "Sanitary rules for the design, equipment, operation and maintenance of industrial and laboratory premises, which are intended for carrying out work with mercury, its compounds and devices."
 - 25.NAOP 9.1.50 - 2.01 - 70 (OST 42-21-11-81) "Radiotherapy offices and departments. Security requirements".
 - 26.NAOP 9.1.50 - 2.02 - Z (OST 42-21-15-83) "X-ray diagnostic cabinets. Security requirements".
 - 27.NAOP 9.1.50 - 2.08 - 86 (OST 42 - 21 - 16 - 86) "Departments, physiotherapy rooms. General safety requirements".
 - 28.NAOP 9.1.50 - 3.01 - 88 (NPAOP 85.0 - 3.01 - 88) "Industry norms for free issuance of overalls, special footwear and other means of personal protection, as well as norms for sanitary clothing and sanitary footwear for employees of institutions, enterprises and organizations of the health care system" .
 - 29.NAOP 9.1.50 - 5.01 - 88 "Typical instructions on labor protection when working with laser devices."
 - 30.NAOP 9.1.50 - 5.02 - 88 "Standard instructions on occupational health and safety for personnel of operating units."
 - 31.NAOP 9.1.50 - 5.04 - 85 "Standard instruction on safety techniques and industrial sanitation for personnel of radiodiagnostic units of medical and preventive institutions."
 - 32.NAOP 9.1.50 - 5.05 - 84 "Standard instruction on safety techniques and industrial sanitation for personnel of x-ray diagnostic offices of medical and preventive institutions of the system of the Ministry of Health of the USSR."
 - 33.NAOP 9.1.50 - 5.07 - 85 "Standard instruction on safety techniques for maintenance and repair of buildings and structures".
 - 34.NAOP 9.1.50 - 5.08 - 85 "Standard instruction on safety techniques when working in sterilization installations."
 - 35.NAOP 9.1.50 - 6.03 - 88 (ГМБ 42-21 - 26 - 88) "Industry methodical instructions. Department of hyperbaric oxygenation. Rules of operation and repair".