


**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

" Life Safety "

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

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Working program of educational discipline **Life Safety** for the preparation of students of second (master's) higher education level of higher education in specialty 221 Dentistry.

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

Agreed

First Vice-Rector



Oleksandra SOROKA

Introduction

The program on the educational discipline " Life Safety " 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 07.01.2014 No. 1556- VII (Article 13, Clause 7), the provision "On the organization of the educational process at the International Academy of Ecology and Medicine" of the 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 with industry standards of higher education. The discipline "Safety of life" 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	
of credits is 1.0	Branch of knowledge: 22 Healthcare		
Sections - 1	Specialty: 221 Dentistry	Year of preparation:	
Content sections - 1		1st	
		Semester	
The total number of hours is 30		1 – st.	
	Educational level: Master of Medicine	Lectures	
		10 h.	
		Seminary	
		10 h.	
		Independent (individual) work	
		10 h.	
		Type of control: current and final control	

The subject of study of the academic discipline is the study of the general laws of the occurrence of hazards, their properties, the consequences of their impact on the human body, the basics of protecting the health and life of a person and his habitat from hazards, as well as the development and implementation of appropriate means and measures to create and maintain healthy and safe living conditions and human activity.

The purpose and tasks of the educational discipline:

1.1. The purpose of teaching the educational discipline "Life Safety":

- formation of knowledge about the general laws of the occurrence of hazards, their properties, the consequences of their impact on the human body;
- formation of knowledge about the basics of protecting the health and life of a person and his living environment from dangers
- formation of a person's conscious and responsible attitude to issues of personal safety and the safety of those around him;
- teaching a person to recognize and assess potential dangers, to determine the way of reliable protection against them, to be able to provide help in case of need to oneself and others, as well as to quickly eliminate the consequences of the manifestation of dangers in various spheres of human activity.

1.2. The main objectives of studying the discipline " Life Safety " are:

- knowledge of laws, principles and rules of life safety management;
- legal provision of human life safety.

1.3 . Competences and learning outcomes, the formation of which helps " Life Safety " discipline .

According to with the requirements of the Higher Education Standard of the discipline " Life Safety " ensures that students acquire the following *competencies*:

Know:

- basic concepts and definitions of life safety;
- principles , methods and means of ensuring safe living;
- physiological and psychological factors of the safety of life of a modern person;
- negative factors of the living environment and their impact on human health;
- valeological and sanological principles of formation of safety of human health and life;
- bad habits and the associated danger to human life;
- dangerous and life-threatening diseases in the practice of a medical worker.

Be able to:

- Assess the relationship between the state of health and the influence of harmful and dangerous factors.
- Predict the negative consequences of exposure to dangerous factors on the human body.
- To determine the basic principles of safety in ensuring the normal life activity of a person.
- Distinguish the relationship between the state of health and the influence of harmful and dangerous factors.
- Anticipate the negative consequences of exposure to dangerous factors on the human body .
- Recognize typical patterns of the body's psychological reactions in extreme situations.
- Apply traditional and non-traditional methods of improving the body.
- To have methods of quantitative and qualitative determination of contamination of food products and water.
- To have techniques for reducing the amount of pollutants in food products.

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

- Determine the main principles of safe human activity.
- Anticipate the consequences of violations of the valeological foundations of the formation of a healthy lifestyle and their impact on the safety of human activities.

- Analyze and evaluate situations dangerous to life, health and professional activity and independently make decisions about taking urgent measures.

2. Information volume of the academic discipline.

45 hours of 1.5 ECTS credits are allocated to the study of the academic discipline, including lectures 10 hours, seminars 10 hours, independent work 25 hours. Normative discipline.

Chapter 1. Life safety

Content section 1 . Safety of human activity in modern conditions

Topic 1. Theoretical foundations of life safety .

Topic 2. A person in the "person - external environment" system .

Topic 3. FROM the doctrine of the external environment in the "man - external environment" system .

Topic 4. Ensuring the safety of human life .

Topic 5. FOOD SAFETY as a component of safe human activity .

3. THE structure of the educational discipline

No s/p	The names of these	Number of hours			
		Full-time			
		In total	l.	P.	s.s.
1.	Theoretical foundations of life safety	6	2	2	2
2.	Man in the " man - external environment " system	6	2	2	2
3.	The value of the external environment in the "human - external environment " SYSTEM	6	2	2	2
4.	Ensuring the safety of human activities	6	2	2	2
5.	Food safety as a component of safe human activity	4	2		2
	Test	2	-	2	-
	In total	30	10	10	10

4. Thematic plan of lectures

No s/p	Topic	Number of hours
1.	Theoretical foundations of life safety	2
2.	Man in the " man - external environment " system	2
3.	The value of the external environment in the "human - external environment " SYSTEM	2
4.	Ensuring the safety of human activities	2
5.	safety as a component of safe human activity	2
	In total	10

5. Thematic plan their seminar classes

	Topic	Number of hours
1.	Theoretical foundations of life safety	2
2.	Man in the " man - external environment " system	2
3.	The value of the external environment in the "human - external environment " SYSTEM	2
4.	Ensuring the safety of human activities	2
	Final control of mastering the " Safety of life " MODULE	2
	In total :	10

6. Thematic plan of students ' independent work

No s/p	Topic	Number of hours
1.	Theoretical foundations of life safety	2
2.	Man in the " man - external environment " system	2
3.	The value of the external environment in the "human - external environment " SYSTEM	2
4.	Ensuring the safety of human activities	2
5.	safety as a component of safe human activity	2
	In total :	10

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

1. The concept of the subject "Life safety", its main tasks. Axiom about potential danger. Hazard classification.
2. The concept of risk and its management. Principles of determining the acceptable level of negative factors in relation to human health .
3. Principles and methods of ensuring the safety of human activities.
4. Fundamentals of management and system analysis of life safety.
5. Legal provision of human life safety.
6. Man as a bioenergetic system. Factors that ensure human health.
7. The role of functional systems of the human body in ensuring its safety of life. Protective functions of the human body.
8. The role of receptors and analyzers of the human body in the assessment of the factors of the system "man - living environment". Weber-Fechner law.
9. Psychological factors determining a person's personal safety. Psychophysiological state of the body.
10. Dependence of the state of the human body on external stimuli. Rational regimes of work and rest.
11. The concept of the external environment and the environment of human life. Classification and characteristics of human life environment.
12. Classification and characteristics of negative factors of the human external environment.
13. Methods and means of human protection from negative environmental factors.
14. Peculiarities of the state of ecological security of Ukraine. Comprehensive assessment of the risk of the impact of anthropogenic factors on human safety and health.
15. The concept of human health as a medico-biological and social category and its spiritual, mental, physical, social aspects.
16. The concept of health and pathology. The concept of valeology and sinology, definition, essence and subject of their study.
17. Individual human health, its indicators and factors, which ensure the stability of health. Risk factors and risk groups.
18. The concept of a way of life, its features in modern conditions. Healing and hardening of the body.
19. The mechanism of the harmful effects of alcohol, smoking, and drugs on the human body as a personal and public danger when using them. Methods of combating bad habits.
20. The impact of nutrition on human life. Requirements for the quality and safety of food products and additives.
21. Impact of pesticides, growth stimulants and other chemicals used in agriculture on human health.
22. Genetically modified products and their danger to human health.
23. Radionuclides in food products. Nutrition in conditions of radiation pollution.
24. Toxic substances in food products. Methods of reducing their quantity in food products.
25. Legislative and regulatory framework of Ukraine on labor protection. Liability for violation of labor protection legislation.
26. 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.
27. Training on labor protection issues. Briefings on labor protection issues.
28. State supervision and public control over labor protection.

29. Investigation and accounting of accidents, occupational diseases and accidents at work.
30. List of occupational hazards in the performance of professional duties of medical and pharmaceutical workers.
31. Rules of industrial sanitation, anti-epidemic regime and personal hygiene of employees of disinfection facilities and units.
32. Safety techniques for the staff of offices and departments of radiation diagnostics and therapy. Peculiarities of influence of modern laser devices.
33. Occupational health and safety in patho-anatomical, patho-histological, and forensic institutions.
34. Safety rules in hyperbaric oxygenation departments, clinical diagnostic laboratories, physiotherapy departments, when working with sterilization facilities.
35. Rules of equipment, operation and industrial sanitation in pharmacies.
36. 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.
37. Concept of "industrial accident" and subsequent measures. Antiretroviral program.
38. Prevention of infection and immunoprophylaxis when a doctor comes into contact with biological materials of a patient with viral hepatitis.
39. Ensuring the safety and quality of donor blood in the field of combating HIV infection/AIDS and other socially dangerous diseases.
40. Tuberculosis in Ukraine and the world. Potential occupational hazard of phthisis doctor and preventive measures. National program to combat tuberculosis in Ukraine.

List of practical skills for final control

1. Determine the main principles of safe human activity.
2. Anticipate the consequences of violations of the valeological foundations of the formation of a healthy lifestyle and their impact on the safety of human life.
3. Analyze and evaluate situations dangerous to life, health and professional activity and independently make decisions about taking urgent measures.

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
140-149	Satisfactorily	D
130-139		E
120-119	Unsatisfactorily	FX
100-119		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.

1 1 . 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. Pre-morbid changes (manifestations) in the body, pre-pathological state, state of uncertain health, pre-morbid states.
2. The concept of a way of life, its features in modern conditions. Healing and hardening of the body.
3. The mechanism of the harmful effects of alcohol, smoking, and drugs on the human body as a personal and public danger when using them. Methods of combating bad habits .

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, 2001. - 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-IV accreditation levels. - K.: VSV "Medicine" 2019. - 184 p.
7. O.V. We are Yatov. A set of educational and methodical materials on the discipline "Life safety. Basics of labor protection". - K., PHE "International Academy of Ecology and Medicine", department of social medicine and preventive medicine, 2021.

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.NAOP 9.1.50 - 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."

3. Information resources:

1. Library of the Academy.
2. Internet.
3. Educational and methodical materials on the discipline at the department.
4. Consultations of the teacher regarding the use of educational and methodical materials and recommended literature.