

Syllabus selective educational component

Life Safety

Subjects:	Life Safety
Level of higher education:	first (undergraduate)
Course page in Moodle:	https://dl2022.khadi.kharkov.ua/course/view.php?id=478
The scope of the educational component	3 credits (90 hours)
The form of the summary control	Test
Consultations:	on schedule
Name of the department:	department of metrology and life safety
Teaching language:	English
Course leader:	Graivoronska Inna Valerievna, Ph.D., associate professor
Contact phone number:	0508596414; 0677953464
Email:	inna_gra@ukr.net

Brief content of the educational component:

the purpose is the student's acquisition of competence, knowledge, abilities and skills for implementation professional activity by specialty, taking into account the risk of man-made accidents and natural hazards that can cause emergency situations and lead to adverse consequences at economic facilities, as well as the formation of students' responsibility for personal and collective safety. **Subject:** general regularities of occurrence and development of hazards, emergency situations, their properties, possible impact on human life and health and formation of skills and abilities necessary in the future practical activity of a specialist for their elimination and prevention, protection of people and the environment.

The main tasks of studying an academic discipline are: application of knowledge, abilities and skills to solve professional tasks with mandatory consideration of industry requirements for ensuring the safety of personnel and protection of the population in dangerous and emergency situations and formation of motivation for strengthening personal responsibility for ensuring a guaranteed level of safety of the operation of industry objects, material and cultural values within the limits of scientific - justified criteria of acceptable risk.

Prerequisites for studying the educational component:

"Labor protection", "Civil protection".

Competencies acquired by the acquirer:

General competences:

Ability to apply knowledge in practical situations. The ability to evaluate and ensure the quality of the work performed

Learning outcomes according to the educational program:

- to determine the scope of one's responsibilities regarding the performance of tasks of professional activity;
- evaluate the environment in terms of personal safety, safety of the team, society;
- to ensure the coordination of the efforts of the production team in preventing emergency situations and eliminating their consequences;

- to identify dangerous factors of the natural and man-made environment;
- provide assistance and advice to employees and the public on practical issues of life safety and protection in emergency situations.

Thematic plan

No topics	Name of topics (LK, LR, PR, SZ, SR)	Number hours	
		ocular	extramural
1	LC1. Theoretical foundations disciplines "Security life activities"	2	2
	PR1. Provision of emergency assistance at traffic accidents	2	2
	SR1. Rules of conduct in the event of an accident	7	7
2	LC2. Characteristics of hazards. Risk	2	2
	PR2. Calculation of risks. The influence of the environment on human health	2	2
	SR2. Calculation of statistical risk	7	7
3	LC3. A person as an element of a system: "a person is a living environment"	2	2
	PR3. Providing pre-medical care	2	2
	SR3. Resuscitation measures	7	7
4	LC4. Dangerous and harmful environmental factors	2	2
	PR4. Psychophysiological properties of a person. Human temperament: typology, diagnosis	2	2
	CP4. The course of human neuropsychological processes. Stress	7	7
5	LC5. Life safety in emergency situations. Natural disasters and rules of behavior in the event of natural emergencies	2	2
	PR5. Determination of human biological rhythms	2	2
	CP5. Seasonal biorhythms	7	7
6	LK6. Emergency situations of man-made, political and social nature. Combined hazards	2	2
	PR6. Methods of studying the properties of attention	2	2
	SR6. Tests to determine the properties of attention	7	7
7	LC7. Social dangers: alcoholism, smoking, drug addiction. Social diseases: prevalence, manifestations, prevention	2	2
	PR7. Human safety when working with computers	2	2
	SR7. Radiation sources	8	8

8	LC8. Legal foundations of the discipline "Life safety"	2	2
	PR8. Human nutrition	2	2
	SR8. Daily human needs	8	8
Together	LK	16	16
	PR	16	16
	SR	58	58

Individual educational and research task: not provided

Teaching methods:

- 1) verbal: 1.1 traditional: lectures, explanations, stories, etc.;
- 1.2 interactive (non-traditional): problem lectures, discussions, etc.;
- 2) visual: method of illustrations, method of demonstrations
- 3) practical: 3.1 traditional: practical classes, seminars;
- 3.2 interactive (non-traditional): business and role-playing games, trainings, seminars-discussions, "round table", brainstorming method, case studies.

Evaluation system and requirements:

Current performance

1The current success rate of the applicants for the performance of educational types of work at the educational level classes and for the performance of independent work tasks is evaluated using a four-point rating scale with subsequent transfer to a 100-point scale. During the evaluation of the current academic performance, all types of work provided by the educational program are taken into account.

1.1 Lecture classes are evaluated by determining the quality of performance of specified tasks.

1.2 Practical classes are evaluated by the quality of performance of a control or individual task, performance and design of practical work.

1.3Laboratory sessions are evaluated by the quality of performance reports laboratory work.

1.4 Seminar classes are evaluated by the quality of the performance of an individual task/abstract.

2Evaluation of the current success rate of students of higher education is carried out on each a practical session (laboratory or seminar) on a four-point scale ("5", "4", "3", "2") and are entered in the journal of academic success.

- "excellent": the winner perfectly mastered the theoretical material, demonstrates in-depth knowledge of the relevant topic or academic discipline, basic provisions;

- "good": the applicant has mastered the theoretical material well, has the basics aspects from primary sources and recommended literature, explains it in an argumentative manner; has 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 analysis of practical ones;

- "satisfactory": the applicant has basically mastered the theoretical knowledge of the course topics or disciplines, orients himself in primary sources and recommended literature, but answers unconvincingly, confuses concepts, answers additional questions uncertainly, lacks stable knowledge; when answering questions of a practical nature, reveals inaccuracy in knowledge, does not know how to evaluate facts and phenomena, connect them with the future profession;

- "unsatisfactory": the applicant has not mastered the educational material of the topic (disciplines), does not know scientific facts, definitions, is almost not oriented in

primary sources and recommended literature, scientific thinking is absent, practical skills are not formed.

3The final score for the current activity is recognized as an arithmetic mean sum points for each lesson, for individual work, current control works according to the formula:

$$K_{current} = \frac{K_1 + K_2 + \dots + K_n}{n},$$

where $K_{current}$ – final assessment of success based on the results of current control;

K_1, K_2, \dots, K_n – evaluation of success n -th measure of current control;

n – the number of measures of current control.

Assessments are converted into points according to the conversion scale (table 1).

Table 1 – Recalculation of the average grade for the current activity into a multi-point scale

4-point scale	100-ballroom scale	4-ball scale	100-ballroom scale	4-ball scale	100-ballroom scale	4-ball scale	100 points scale
5	100	4.45	89	3.90	78	3.35	67
4.95	99	4.4	88	3.85	77	3.3	66
4.9	98	4.35	87	3.80	76	3.25	65
4.85	97	4.3	86	3.75	75	3.2	64
4.8	96	4.25	85	3.7	74	3.15	63
4.75	95	4.20	84	3.65	73	3.1	62
4.7	94	4.15	83	3.60	72	3.05	61
4.65	93	4.10	82	3.55	71	3	60
4.6	92	4.05	81	3.5	70	from 1.78 to 2.99	from 35 to 59
						reassembly	
4.55	91	4.00	80	3.45	69	from 0 to 1.77	from 0 to 34
4.5	90	3.95	79	3,4	68	repeated study	

Final assessment

1A student of higher education receives a credit in the last lesson in the discipline for the results of the current assessment. The average score for the current activity is converted into points on a 100-point scale, according to the conversion table (table 1).

Applicants for higher education who have a current grade point average in the discipline lower than "3" (60 points) can increase their current grade by taking tests in the discipline in the last session.

Assessment of the knowledge of applicants through testing is carried out according to the following scale:

- "Excellent": at least 90% of correct answers;
- "Very good": from 82% to 89% of correct answers;
- "Good": from 74% to 81% of correct answers;
- "Satisfactory": from 67% to 73% of correct answers;
- "Satisfactory enough": from 60% to 66% of correct answers;
- "Unsatisfactory": less than 60% of correct answers.

2The condition for obtaining credit is:

- making up for all missed classes;

– the average current grade in the discipline is not lower than "3" (60 points).

3For the performance of individual independent work and participation in scientific events winners are awarded additional points.

3.1Additional points are added to the sum of points scored by the student of higher education for current educational activity (for disciplines for which the final form of control is a test), or to the final assessment in a discipline for which the final form of control is an exam.

3.2The number of additional points awarded for different types of individual tasks, depends on their volume and importance:

- prize places in the discipline at the international / all-Ukrainian competition scientific student works - 20 points;
- prize places in the discipline at the All-Ukrainian Olympiads - 20 points;
- participation in the international / all-Ukrainian competition of scientific student works - 15 points
- participation in international / all-Ukrainian scientific conferences of students and young scientists – 12 points;
- participation in all-Ukrainian Olympiads in the discipline - 10 points
- participation in Olympiads and scientific conferences of the Khnadu in the discipline - 5 points;
- performance of individual scientific research (educational and research) tasks increased complexity - 5 points.

3.3The number of additional points cannot exceed 20 points. **4**

Learning outcomes are evaluated (*select the required one*):

- on a two-point scale (passed/failed) according to table 2. The final score together with additional points cannot exceed 100 points.

Table 2– Scale for transferring points to the national evaluation system

On a 100-point scale	On a national scale
from 60 points to 100 points	counted
less than 60 points	not counted

Course policy:

- the course involves working in a team, the environment in the classroom is friendly, creative, open to constructive criticism;
- mastering the discipline involves mandatory attendance of lectures and practical classes, as well as independent work;
- independent work involves the study of individual topics of the academic discipline, which are presented in accordance with the program for independent study, or were considered briefly;
- all tasks provided by the program must be completed within the set time;
- if the student of higher education is absent from classes for a good reason, he presents the completed tasks during independent preparation and consultation of the teacher;
- while studying the course, students of higher education must adhere to the rules of academic integrity, set forth in the following documents: "Rules of academic integrity of participants in the educational process of the Khnadu" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_dobroch_1.pdf), "Academic integrity. Checking the text of academic, scientific and qualification works for plagiarism" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_85_1_01.pdf), "Moral and ethical code of participants in the educational process of the National Academy of Sciences" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_MEK_1.pdf).

- in case of detection of plagiarism, the applicant receives 0 points for the task and must repeat the tasks provided for in the syllabus;
- writing off during tests and exams is prohibited (including using mobile devices). Mobile devices are allowed to be used only during online testing.

Recommended Books:

1. Pistun I. P. Life safety. Tutorial. - Sumy: "University book", 2000. - 302 p.
2. Life safety: Training manual / edited by Tsapka V. G. - K.: Znannia-Press, 2003. - 397 p.
3. Yu. S. Skoblo, T. B. Sokolovska, D. I. Mazorenko, etc. Security life activities - Kyiv, 2003. - 424 p.
4. Zhelibo E.P., Zaverukha N.M., Zatsarnyi V.V. Life safety. - 2003. - 328 p.
5. Pistun I.P., Kit Y.V. Life safety (Psychophysiological aspects). Practical training. Tutorial. - Lviv, "Afisha", 2000. - 239 p.

Additional sources:

1. distance course: <https://dl2022.khadi.kharkov.ua/course/view.php?id=478>
2. <http://files.khadi.kharkov.ua/ /mekhanichnij-fakultet/metrologiji-ta-bezpeki-zhittediyalnosti/itemlist/category/510-navchalni-mb.html>
3. <http://files.khadi.kharkov.ua/mekhanichnij-fakultet/metrologiji-ta-bezpeki-zhittediyalnosti/item/9640-praktikum-bgd.html>

Developer(s)
the syllabus of the academic discipline



signature

Inna GRAYVORONSKA

Full name

Head of the MBZD department



Oleg BOGATOV

Full name