

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ  
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ  
ІМЕНІ СЕМЕНА КУЗНЕЦЯ



**«БЕЗПЕКА ЖИТТЄДІЯЛЬНОСТІ ТА ОХОРОНА ПРАЦІ»**

робоча програма тренінг-курсу

Галузь знань	07 Управління та адміністрування
Спеціальність	073 Менеджмент
Освітній рівень	перший (бакалаврський)
Освітня програма	бізнес-адміністрування

Статус дисципліни	обов'язкова
Мова викладання, навчання та оцінювання	англійська

Завідувач кафедри  
готельного і ресторанного бізнесу

Оксана ДАВИДОВА

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APPROVED

at the meeting of the department of hotel and restaurant business.

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**Page of renewal and re-approval  
of the training course syllabus**

Academic year	Date of department meeting of work program creator	Meeting number	The signature of the department head

### Training course annotation

The reverse side of scientific, technical, social, and economic progress is the increased risk of occurrence and negative impact on human life and the environment. That is why improving safety is one of the most urgent tasks today. It is impossible to create absolute security. However, minimising the danger likelihood is a feasible but difficult task because it requires people to rethink and re-evaluate the experience and knowledge of modern science, in other words, a radical change in the human worldview. New knowledge branches are to achieve this goal. They combine the diverse current and past human experiences. One example of such a complex combination of knowledge is the training course “Life safety and labour protection”. The training course basis is an analysis and solution of human safety issues. Its content includes such elements as a comprehensive study and classification of hazards, which may affect humans, the sources of their occurrence, and means and measures aimed at their prevention and elimination. The scientific basis of the training course consists of the results of modern research in physiology and psychology, ergonomics, ecology, etc., which provides systematic knowledge that the student receives.

**The training course aims** to study the general patterns of occurrence and development of dangers, analyse the nature and consequences of the impact of hazards on human health, and format necessary skills and abilities to prevent and eliminate risks.

**The training course tasks:** identification of optimal parameters of human activity; study of the conditions of the hazards formation; forecasting the occurrence of the danger; determination of methods of prevention and reduction of the negative consequences of the hazards’ impact on people.

**Training course subject** is human life activity.

### Training course characteristic

Level	1
Semester	2
Number of ECTS credits	2
Form of final control	credit

### Structural-logical scheme of studying the training course:

Prerequisites	Postrequisites
Entry to the profession	Management
	Economy of enterprises

### Competence and results of studying training course

Competences	Learning outcomes
GC 1. The ability to implement one’s rights and responsibilities as a member of society; to be aware of the values of civil (democratic) society and the need for its sustainable development, the rule of the law, and the rights and freedoms of a person and a citizen of Ukraine.	LO1. To know one’s rights and responsibilities as a member of society, to be aware of the values of civil society, the rule of law, and the rights and freedoms of a person and a citizen in Ukraine.

GC2. The ability to preserve and multiply moral, cultural, and scientific values; to multiply the achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society and technology; to use different types and forms of motor activity for active recreation and leading a healthy lifestyle.	LO2. To preserve moral, cultural, and scientific values; to multiply the achievements of society; to use various types and forms of physical activity to lead a healthy lifestyle.
SC6. The ability to act socially responsible and consciously.	LO15. Demonstrate the ability to act socially responsible and conscious on the basis of ethical considerations (motives), respect for diversity and interculturality.

## **The training course program**

### **Content module 1. Life safety and labour protection**

#### **Theme 1. Basic concepts and basic principles of life safety**

##### *1.1. Purpose, object and subject of the training course.*

The aim, object and subject of the training course. Training course content and structure. Connection of training course with other disciplines. Basic concepts - life, activity, environment, safety, danger, emergency, etc. Safety of human, society and nation. Safety culture is an element of general culture, which realises the protective function of humanity.

##### *1.2. Taxonomy, identification and quantification of dangers.*

Taxonomy, identification and quantification of dangers. Criteria for the transition of a dangerous event to an emergency.

##### *1.3. Classification of dangers and emergencies.*

Classification of dangers depending on the consequences of the influence of injurious factors on the human, by the origin, by the damage done, by localization are connected with, by the character of influence on a human and others.

Classification of emergencies by the origin of the events that caused them. Types of emergencies by levels of territorial distribution and volumes of technical and material resources necessary for the liquidation of their consequences.

Principles of first aid to victims in a dangerous situation or emergency.

##### *1.4. Health is a necessary condition for a human safe existence.*

Valeology is the science of human health. Human genotype and phenotype. Characteristics of individual and social health. Basic mechanisms for maintaining human health. Factors that affect human health.

##### *1.5. General statements of the legislation of Ukraine on life safety.*

The documents on which the legislative and regulatory framework of Ukraine on life safety is based. Their brief description.

##### *1.6. Structural and functional scheme of the state management of safety.*

Structural and functional scheme of state management of life safety in Ukraine. Norms of legislation, by-laws, standards and technical conditions, technical and administrative regulations that define the principles and mechanisms of life safety regulation.

Monitoring is the form of control over the functioning of the life safety system. The work of central state and local executive authorities on ensuring life safety. Interaction of employer and employee in solving problems of increasing the safety level. The role of supervisory commissions in monitoring the functioning of the life safety system.

## **Theme 2. Physiological and psychological criteria of human safety**

### *2.1. Physiological systems of the human body.*

The subsystems and systems of the human body, their characteristics and their role in the human body. Protective properties of the human body.

### *2.2. General characteristics of human analysers.*

The role of analysers in the human body. Absolute and differential sensation thresholds. Weber-Fechner law. Classification of analysers.

### *2.3. Reflex, reflex arc.*

The significance of reflexes. Conditioned and unconditioned reflexes, features of their work.

### *2.4. Mental processes and properties*

Human psyche. Mental processes: thinking, memory, attention, etc. Mental properties: temperament, character, abilities, will, etc. The role of mental processes and properties in human safety. Person psychological reliability; its role in ensuring safety.

### *2.5. Classification and characterization of human conditions.*

The concept of “the organism state”; classification of the organism states. Analysis of the most common negative organism conditions: fatigue, stress, monotony. The impact of negative organism conditions on human safety. Possible ways to solve the problem of negative organism conditions. The measures to increase the psychophysiological resistance of the employee to occupational dangers.

## **Theme 3. Natural environment: characteristics and impact on human**

### *3.1. The natural environment characteristic.*

The natural environment characteristic. Eco-characteristics of human activity. Dangerous natural factors classification. Their effect on human life activity.

### *3.2. Natural dangers. Their classification. Adverse impact on human safety.*

The adverse impact of dangerous meteorological phenomena on human safety.

The adverse impact of dangerous topological phenomena on human safety.

The adverse impact of dangerous tectonic phenomena on human safety.

The adverse impact of dangerous cosmic phenomena on human safety.

Biological dangers. Characteristic of dangerous pathogenic microorganisms: protozoa, fungi, viruses, rickettsia, bacteria. Pandemics, epidemics, mass poisonings. Characteristics of diseases (cholera, anthrax, plague, etc.). Infectious diseases of animals and plants.

### *3.3. Adverse anthropogenic impact on the natural environment.*

Anthropogenic dangers. Their characteristics. Consequences of their impact on humans and the natural environment.

## **Theme 4. Technogenic environment: characteristics and impact on human**

### *4.1 The technogenic environment characteristic.*

The technogenic environment characteristic. Dangerous technogenic factors classification.

### *4.2. Technogenic dangers.*

Industrial accidents, catastrophes and their consequences. Dangerous events on transport and accidents on transport communications. Communal accidents and their consequences.

### *4.3. Adverse impact of technogenic dangers on human safety.*

Factors affecting human safety: microclimate, lighting, noise, vibration, electromagnetic fields and radiation. Their characteristics, classifications and adverse impact on humans. Type of dangerous chemicals by the nature of the influence on the human. Ways of getting dangerous chemicals into the human body.

### *4.4. The ways to limit the adverse impact of technogenic factors.*

Professional selection and career guidance as a ways for ensuring the human safety. Types of professional selection: medical, social, educational, psychophysiological.

## **Theme 5. Social environment: characteristics and impact on human**

### *5.1 The social environment characteristics. Social dangers.*

The social environment characteristics. Dangerous social factors. Social factors that affect human health. Bad habits, social diseases and their prevention. Alcoholism and drug addiction. Rising crime as a risk factor. Concepts and varieties of the crowd. Human behaviour in the crowd. Factors that increase a person's likelihood of being at risk.

### *5.2. Humanity global problems.*

Humanity global problems: ecological crisis, resource crisis, peaceful coexistence, environmental protection, fuel and energy, raw materials, food supply, demographic situation, information security, elimination of dangerous diseases.

Socio-political conflicts with the use of weapons and means of mass destruction. Types of terrorism. Classification of objects for protection against terrorist acts. Anti-terrorism criteria for assessing vulnerability and increasing the resilience of high-risk facilities.

### *5.3. Information technologies and safety of human life activity.*

Information technologies and safety of human life activity. The impact of the information factor on human health and public safety.

## **Theme 6. Risk. Risk analysis. Risk management**

### *6.1. Life safety axioms.*

A systematic approach to life safety. The absolute safety axiom and the potential danger axiom. Their comparison and role in creating safe living conditions.

### *6.2. Risk analysis.*

Definitions of "risk analysis" and "risk". Classifications of risks by the scale of distribution, expediency, degree of acceptability and other characteristics. Risk assessment, obtaining quantitative danger characteristics, examples of calculations. The concept of acceptable risk, its meaning for creating safe living conditions in society.

### *6.3. Risk assessment methods.*

Approaches to risk determination.

Engineering method: qualitative stage (characteristics of all possible dangers), quantitative stage (selection of the most probable dangers, development of effective measures to eliminate them by building "fault tree").

Model method: construction of models of danger occurrence and development, analysis of possible negative consequences of its realisation for the person.

Expert method: professional analysis of danger occurrence risk.

Sociological method: conducting a population quiz, statistical data processing, identifying the most significant dangers.

### *6.4. Risk management.*

Definition of "risk management". Safety management by comparing the costs and benefits of risk reduction. Development of risk strategy to reduce the probability of risk realisation and minimise possible adverse consequences. Choice of methods and tools to manage identified risk.

## **Theme 7. Labour protection issues. Legal and organisational bases of labour protection**

### *7.1. The current state of labour protection in Ukraine and abroad.*

Analysis of the state of labour protection in Ukraine and abroad. International and Ukrainian labour protection programs: implementation and results.

### *7.2. Legislation of Ukraine on labour protection.*

Constitutional principles of labour protection in Ukraine. Law of Ukraine "On labour protection". Basic principles of Ukraine state policy in labour protection. Guarantees of workers' rights to labour protection, benefits and compensation for difficult and harmful working conditions. Labour protection of women, minors and the disabled. Normative-legal acts on labour protection: definition, structure and register. Responsibilities of employees for compliance with labour

protection regulations. Occupational Safety Standards System. National standards of Ukraine on labour protection. Sanitary, building norms, other national documents on labour protection.

*7.3. Responsibility of officials and employees for violations of labour protection legislation.*

*7.4. Occupational safety financing.*

Basic principles and sources. Ways of labour protection, the costs of implementation and acquisition of which are included in gross expenditures.

*7.5. The state management system of labour protection in Ukraine.*

Competence and powers of state bodies of labour protection management. National Council for Safe Life Activity. Bodies of state supervision over labour protection, their powers and rights. Public control over compliance with labour protection legislation.

*7.6. Structure, functions and tasks of labour protection management in the organisation.*

Labour protection service of the enterprise. Status and subordination. The tasks, functions of the labour protection service. Structure and number of employees in labour protection services. Rights and responsibilities of labour protection employees.

## **Theme 8. Physiology and occupational health**

*8.1. Work area air.*

Working area micro-climate. Rationing and control of micro-climate parameters. Methods of micro-climate parameters normalisation. Air condition control. Ways to prevent air pollution of the work area. The organisation of indoor air exchange, air balance. Natural ventilation and its types. Artificial (mechanical) ventilation systems, their choice and design.

*8.2. Indoor lighting.*

Natural, artificial, combined lighting. Primary requirements for indoor lighting. Lighting rationing. Classification of artificial light sources.

*8.3. Vibration.*

Vibration classification. Hygienic vibrations rationing. Methods of vibration parameters control. Ways of collective and individual protection against vibration.

*8.4. Noise.*

Noise classification. Noise normalisation. Noise control. Ways of collective and individual protection against noise. Sources and parameters of infrasonic and ultrasonic vibrations. Rationing and control of infrasonic and ultrasonic vibrations. Ways of protection against ultrasound and infrasonic.

*8.5. Electromagnetic fields and radiation.*

Classification of electromagnetic fields of radio frequency radiation. Rationing of electromagnetic fields and radiation of the radio frequency range. Methods of control of electromagnetic fields and radiation of radio frequency range. Protection against electromagnetic fields and radiation of the radio frequency range.

Classification of the optical range radiation. Features of infra-red, visible and ultraviolet radiations, their rationing and control methods. Ways of protection against infra-red, visible and ultraviolet radiations.

Ionizing radiation sources, classification and features of their use. Ways of protection from ionizing radiation.

*8.6. Electric current.*

Electrical injuries. Factors influencing the consequences of electric shock. Classification of premises according to the degree of electric shock danger. Conditions of electric shock. Safe operation of electrical installations: electrical protective equipment and measures.

*8.7. Requirements for the planning and placement of work premises.*

Classes of the enterprise's harmfulness according to sanitary norms. Energy and water supply, sewerage, transport communications at the enterprise, organization or institution. Occupational safety requirements for the location of office equipment and workplace organisation.



## **Theme 9. Workplace safety.**

### *9.1. Industrial injuries, occupational diseases, industrial accidents.*

Incidents and inconsistencies. The goal and objectives of prevention of accidents, occupational diseases and poisonings. The causes of occupational injuries and diseases. Classification of injuries by severity.

### *9.2. Ways to prevent injuries and occupational diseases.*

### *9.3. Principles of safe workplace organising.*

Ergonomics is the science of creating safe working conditions. The “workplace” concept. Evaluating the quality of workplace organisation. The modes of work and rest. Adverse consequences of an incorrect regime of work and rest for workers.

## **Theme 10. Fire safety**

### *10.1. Indicators of explosive properties of materials and substances.*

Premises categories for explosion and fire risk. Classification of explosive and flammable premises and areas.

### *10.2. Means and measures to ensure the fire safety of the premises.*

Fire alarm and its types. Fire extinguishers and their classification. Study of fire safety issues by employees.

### *10.3. Ensuring and controlling the state of fire safety in working premises.*

The work of state fire supervision. The organisation of fire protection of enterprises.

The list of practical classes, questions and tasks for independent work is in the table “Training course rating-plan”.

## **Teaching and learning methods**

### **Distribution of methods of teaching and learning on the themes of the training course**

Theme	Practical application of educational technologies
Theme 1. Basic concepts and basic principles of life safety	Discussions, presentations, illustrations
Theme 2. Physiological and psychological criteria of human safety	Discussions, presentations, illustrations
Theme 3. Natural dangers, the nature of manifestations and their impact on human	Work in small groups, presentations, illustrations
Theme 4. Technogenic dangers, the nature of manifestations and impact on human	Work in small groups, presentations, illustrations
Theme 5. Social dangers, the nature of manifestations and their impact on human	Work in small groups, presentations, illustrations
Theme 6. Risk. Risk analysis. Risk management	Discussions, presentations, illustrations
Theme 7. Issues of labour protection. Legal and organisational bases of labour protection	Discussions, presentations, illustrations
Theme 8. Physiology and occupational health	Work in small groups, presentations, illustrations
Theme 9. Workplace safety	Discussions, presentations, illustrations
Theme 10. Fire safety	Work in small groups, presentations

## The procedure for evaluating learning outcomes

The system of the competencies assessment takes into account the types of classes, which include practices and independent work. Competencies assessment is carried out according to the accumulative 100-point system. Control measures include current control, which is carried out during the semester on practical classes and is assessed by the sum of scored points. The maximum amount of points that a student can get during the semester is 100 points; the minimum amount that allows a student to get credit is 60 points.

Current control is carried out in the following forms:

- individual quiz;
- performance of competence-oriented tasks;
- carrying out control works.

Current assessment of student knowledge is carried out to check the level of readiness of the student to perform a particular task. The objects of current control are:

effectiveness, activity, regularity of the student's work during the semester, as well as attending classes;

- performance of competence-oriented tasks;
- performing tasks for independent work.

Assessment of student work is based on the following criteria:

- degree of understanding and mastering of theoretical material from the training course;
- degree of mastering practical skills from the training course and the ability to apply them in different conditions of activity;
- ability to implement the acquired theoretical knowledge to solve practical problems, analysis of specific situations, both submitted for independent study and considered in the classroom;
- acquaintance with the recommended literature on life safety and labour protection;
- logic and analytical presentation of the material in written works and classroom speeches, the argumentation of their position, the ability to summarize information and draw conclusions based on it.

Student knowledge assessment takes into account the compliance of the task with all five criteria. The absence of one of the criteria reduces the score by a certain number of points.

The training course contains twelve competency-oriented tasks, for each of which the student can get 4 points maximum. The total number of points is 48. The crucial criteria for assessment are the quality, timeliness and validity of the task. In case of an insufficient level of task performance, the teacher has the right to reduce the grade for work.

Test controls are conducted twice per semester. Tests include multiple-choice questions to check the knowledge of the main categories of the training course. The student can get 20 points maximum for each correctly completed test task. The maximum number of points that a student can get for completing tests is 40 points. To obtain a grade: "satisfactory" the student must score at least 12 points; "good" – at least 15 points; "excellent" – at least 18 points.

The common criteria for evaluation of student's self-study are depth and strength of knowledge, level of thinking, ability to systematise knowledge on separate topics, ability to conclude, mastery of categorical apparatus, skills and techniques of practical tasks, ability to find necessary information, to carry out its processing. The form of testing student's self-study is an individual quiz. According to the individual quizzes results, a student can obtain 12 points maximum.

### Training course rating-plan

Theme	Forms and types of learning		Assessment form	Max. point
<b>Theme 1</b>	<i><b>Classroom work</b></i>			
	Practice	Basic concepts of life safety and labour protection	Competence-oriented tasks	4
	<i><b>Self-study</b></i>			
	Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	–	–
<b>Theme 2</b>	<i><b>Classroom work</b></i>			
	Practice	Health and mechanisms of its support	Competence-oriented tasks	4
	<i><b>Self-study</b></i>			
	Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	–	–
	<i><b>Classroom work</b></i>			
	Practice	Organism's energy homeostasis types	Competence-oriented tasks	4
	<i><b>Self-study</b></i>			
	Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	–	–
	<i><b>Classroom work</b></i>			
	Practice	Mental processes and properties	Competence-oriented tasks	4
	<i><b>Self-study</b></i>			
	Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	–	–
	<i><b>Classroom work</b></i>			
	Practice	Fatigue and stress	Competence-oriented tasks	4
	<i><b>Self-study</b></i>			
Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	–	–	
<b>Theme 3</b>	<i><b>Classroom work</b></i>			
	Practice	Natural environment: characteristics and impact on human.	Competence-oriented tasks	4
	<i><b>Self-study</b></i>			
	Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	–	–
<b>Theme 4</b>	<i><b>Classroom work</b></i>			
	Practice	Technogenic environment: characteristics and impact on human. Human resources	Competence-oriented tasks	4
			Test №1	20

	<i>Self-study</i>			
	Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	–	–
<b>Theme 5</b>	<i>Classroom work</i>			
	Practice	Social environment: characteristics and impact on human	Competence-oriented tasks	4
	<i>Self-study</i>			
	Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	–	–
<b>Theme 6</b>	<i>Classroom work</i>			
	Practice	Risk analysis. Risk assessment. Risk management. Risk classifications	Competence-oriented tasks	4
	<i>Self-study</i>			
	Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	–	–
<b>Themes 7, 8</b>	<i>Classroom work</i>			
	Practice	Ventilation and air conditioning in administrative and public premises. Natural and artificial lighting In administrative and public premises	Competence-oriented tasks	8
	<i>Self-study</i>			
	Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	–	–
<b>Themes 9, 10</b>	<i>Classroom work</i>			
	Practice	Workplace safety	Competence-oriented tasks	4
			Test №2	20
	<i>Self-study</i>			
	Questions and tasks for self-study	Search, selection and review of literary sources on a given topic	Individual quiz	12

### Recommended literature

#### Base literature

1. Грибан В. Г. Охорона праці : навч. посіб. / В. Г. Грибан, О. В. Негодченко. – Київ : Центр навчальної літератури, 2019. – 280 с.
2. Запорожець О. Безпека життєдіяльності : навч. посіб. / О. Запорожець. – Київ : Центр навчальної літератури, 2019. – 448 с.

#### Additional literature

3. Висловух А. Безпека харчування як основа безпечної життєдіяльності людини. : навч. посіб. / А. Висловух. – Київ : Центр навчальної літератури, 2018. – 252 с.
4. Міхеєнко О. І. Валеологія. Основи індивідуального здоров'я людини : навч. посіб. / О. І. Міхеєнко. – Суми : Університетська книга, 2019. – 448 с.

### **Internet resources**

5. “Life safety and labour protection (all specialties), assoc. prof. Olga Protasenko” [Електрон. ресурс] : Сайт ПНС ХНЕУ ім. С. Кузнеця. – Режим доступу : <https://pns.hneu.edu.ua/course/view.php?id=8339>.

6. Тренінг-курс “Основи охорони праці” [Електрон. ресурс] : практикум для студентів усіх спеціальностей першого (бакалаврського) рівня / уклад. Ю. В. Буц, О. Ф. Протасенко, О. М. Борисенко, В. Л. Безсонний. – Харків : ХНЕУ ім. С. Кузнеця, 2020. – 112 с. – Режим доступу : <http://repository.hneu.edu.ua/handle/123456789/23329>.

7. Тренінг-курс “Безпека життєдіяльності” [Електрон. ресурс] : практикум для студентів усіх спеціальностей першого (бакалаврського) рівня / уклад. О. Ф. Протасенко, Є. О. Михайлова. – Харків : ХНЕУ ім. С. Кузнеця, 2021. – 126 с. – Режим доступу : <http://repository.hneu.edu.ua/handle/123456789/26070>.