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FEDERAL STATE AUTONOMOUS EDUCATIONAL INSTITUTION OF HIGHER EDUCATION
"MOSCOW POLYTECHNIC UNIVERSITY"
(MOSCOW POLYTECHNIC UNIVERSITY)

Faculty of Economics and Management

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WORKING PROGRAM OF THE DISCIPLINE

«Safety of Vital Activity»

Direction of training/specialty
38.03.01 Economy

Profile/specialization
International business and foreign economic

Qualification
bachelor

Forms of study
full-time

Moscow, 2025

Разработчик(и):

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Content

1. Objectives, tasks and planned learning outcomes for the discipline4 Place
2. of the discipline in the structure of the educational program5 Structure
3. and content of the discipline5
   3.1. Types of academic work and labor intensity5
   3.2. Thematic plan for studying the discipline6
   3.3. Contents of the discipline**Error! Bookmark not defined.**
   3.4. Topics of seminars/practical and laboratory classes11
   3.5. Subjects of course projects (course papers)12 Educational,
4. methodological and informational support12
   4.1. Regulatory documents and GOSTs12
   4.2. Main literature12
   4.3. Further reading12
   4.4. Electronic educational resources12
   4.5. Licensed and freely distributed software12
   4.6. Modern professional databases and information reference systems13

5. Logistics13 Methodological
6. recommendations13
   6.1. Methodological recommendations for the teacher on the organization of training13
   6.2. Methodological instructions for students on mastering the discipline14
7. Fund of assessment tools15
   7.1. Methods of monitoring and assessing learning outcomes15
   7.2. Scale and criteria for assessing learning outcomes16
   7.3. Evaluation tools18

1. Objectives, tasks and planned learning outcomes for the discipline

The main goals of mastering the discipline "Life Safety" include the following:

Objectives for mastering Module 1 “Life Safety”:

- to develop in students a general understanding of the inseparable unity effective professional activity with the requirements for human safety and security. The implementation of these requirements guarantees the preservation human performance and health, prepares him for action in extreme conditions.

The main objectives of mastering Module 1 “Life Safety” include:

- formation of basic knowledge about existing threats to the environment, its negative factors;
- study of behavior patterns in situations that threaten human life and health;
- use of modern methods of hazard prevention;
- development of skills in providing first medical aid and ensuring human safety;
- study of rules and regulations for ensuring life safety human.

Objectives for mastering Module 2 “Basics of Military Training”:

- developing in students the knowledge, skills and abilities necessary for becoming students of higher education institutions as citizens capable and ready to fulfill their military duty and the obligation to defend their homeland in accordance with the legislation of the Russian Federation.

The main objectives of mastering the module “Basics of Military Training” include:

- developing students' understanding of the main provisions of military doctrine Russian Federation, as well as the principles of military development and the structure of the Armed Forces of the Russian Federation (AF RF);
- development of high social consciousness and military duty in students;
- development of discipline, high moral and psychological qualities the personality of a citizen - a patriot;
- mastering basic knowledge and developing key military skills;
- disclosure of the specifics of the activities of various categories of military personnel of the RF Armed Forces;
- familiarization with regulatory documents in the field of defense states and military service;
- development of discipline in formation, respectful attitude towards military personnel rituals and traditions, military uniforms;
- study and acceptance of the rules of military courtesy;
- mastering knowledge of statutory norms and rules of conduct for military personnel. Training in the discipline "Life Safety" is aimed at developing the following competencies in students:

Code and name of competencies	Achievement indicators competencies
UK-8. Capable of creating and maintaining in everyday life and in professional activities safe living conditions for preserving the natural environment, ensuring sustainable development of society, including in the event of a threat or occurrence of emergency situations and military conflicts	IUK-8.1. Analyzes and identifies factors that have a harmful effect on the vital functions of elements of the environment (technical means, technological processes, materials, buildings and structures, natural and social phenomena), as well as hazardous and harmful factors within the framework of the activities carried out

	IUK-8.2. Understands the importance of maintaining safe working and living conditions, preserving natural environment to ensure sustainable development of society, including in the event of a threat of dangerous or emergency situations and military conflicts IUK-8.3. Explains the rules of conduct in the event of emergencies of natural and man-made origin and military conflicts, describes the methods of participation in restoration activities

2. The place of the discipline in the structure of the educational program

The discipline "Life Safety" is one of the academic disciplines of the compulsory part of Block 1 "Disciplines (modules)" and is included in the educational program for training bachelors in all areas of training for all forms of education.

3. Structure and content of the discipline

The total workload of Module 1 “Life Safety” is 2 credit(s) (72 hours).

The total workload of Module 2 “Fundamentals of Military Training” is 2 credit units, i.e. 72 academic hours.

3.1 Types of academic work and labor intensity

3.1.1. Full-time education
Module 1. "Life Safety"

No. p/p	Type of academic work	Quantity hours	Semesters	
			5	
1	**Classroom lessons**	**36**	36	
	Including:			
1.1	Lectures	18	18	
1.2	Seminars/practical classes	10	10	
1.3	Laboratory exercises	8	8	
2	**Independent work**	36	36	
	Including:			
2.1	Abstract	36	36	
3	**Interim assessment**			
	Credit/differential credit/exam	**credit**	credit	
	Total	**72**	72	

Module 2. "Basics of military training"

No.	Type of academic work	Quantity	Semesters

p/p		hours	5	
1	**Classroom lessons**	**36**	36	
	Including:			
1.1	Lectures	18	18	
1.2	Seminars/practical classes	18	18	
1.3	Laboratory exercises	-	-	
2	**Independent work**	**36**	36	
	Including:			
2.1	Abstract	36	36	
3	**Interim assessment**			
	Credit/differential credit/exam	**credit**	credit	
	Total	**72**	72	

3.2 Thematic plan for studying the discipline (by form of education)

3.2.1. Full-time education

No. p/p	Sections/Topics disciplines	Labor intensity, hour					
		Total	Classroom work				Be independent work
			Lectures	Seminarskie/ practical	Laboratory classes	Practical training	
1	Module 1. Security life activity						
1.1	Topic 1. Introduction. Man and the technosphere.	10	4	2	2		2
1.2	Topic 2. Psychophysiological and ergonomic foundations security.	8	4	-	-		4
1.3	Topic 3. Identification of harmful and dangerous environmental factors	12	2	2	2		6
1.4	Topic 4. Impact of harmful and dangerous environmental factors on humans. Protection of humans and the environment from harmful and dangerous factors of natural, anthropogenic and technogenic origin	8	2	-	-		6
1.5	Topic 5. Providing comfortable conditions for human life and activity	12	2	2	2		6
1.6	Topic 6. Emergencies and methods of protection in the conditions of their implementation	10	2	2	-		6
1.7	Topic 7. Security Management	10	2	-	2		6

	life activity						
	Total	72	18	10	8		36
2	Module 2. Fundamentals of military training						
2.1	Topic 1. General military regulations of the Armed Forces of the Russian Federation	10	2	2			6
2.2	Topic 2. Fundamentals of tactics of combined arms units	14	4	4			6
2.3	Topic 3. Radiation, chemical and biological protection	10	2	2			6
2.4	Topic 4. Military topography	10	2	2			6
2.5	Topic 5. Fundamentals of medical care	18	6	6			6
2.6	Topic 6. Legal training and military-political training	10	2	2			6
	Total	**72**	**18**	**18**			**36**

3.2.2. Part-time and part-time education
Module 1. "Life Safety"

No. p/p	**Type of academic work**	**Quantity hours**	**Semesters**	
			5	
1	**Classroom lessons**	**18**	18	
	Including:			
1.1	Lectures	6	6	
1.2	Seminars/practical classes	6	6	
1.3	Laboratory exercises	6	6	
2	**Independent work**			
	Including:	**54**	54	
2.1	Abstract			
3	**Interim assessment**			
	Credit/differential credit/exam	**credit**	credit	
	Total	**72**	72	

Module 2. "Basics of military training"

No.	**Type of academic work**	**Quantity**	**Semesters**

p/p		hours	5	
1	**Classroom lessons**	**18**	18	
	Including:			
1.1	Lectures	8	8	
1.2	Seminars/practical classes	10	10	
1.3	Laboratory exercises	-	-	
2	**Independent work**	**54**	54	
	Including:			
2.1	Abstract	54	54	
3	**Interim assessment**			
	Credit/differential credit/exam	**credit**	credit	
	Total	**72**	72	

3.3 Thematic plan for studying the discipline (by form of education)

3.3.1. Part-time and part-time education

No. p/p	Sections/Topics disciplines	Labor intensity, hour					
		Total	Classroom work				Be independent work
			Lectures	Seminarskie/ practical	Laboratory classes	Practical training	
1	Module 1. Security life activity						
1.1	Topic 1. Introduction. Man and the technosphere.	10	2		2		6
1.2	Topic 2. Psychophysiological and ergonomic foundations security.	10		2			8
1.3	Topic 3. Identification of harmful and dangerous environmental factors	10			2		8
1.4	Topic 4. Impact of harmful and dangerous environmental factors on humans. Protection of humans and the environment from harmful and dangerous factors of natural, anthropogenic and technogenic origin	10	2				8
1.5	Topic 5. Providing comfortable conditions for human life and activity	10		2			8
1.6	Topic 6. Emergencies and methods of protection in the conditions of their implementation	12	2		2		8
1.7	Topic 7. Security Management	10		2			8

	life activity						
	Total	72	6	6	6		54
2	Module 2. Fundamentals of military training						
2.1	Topic 1. General military regulations of the Armed Forces of the Russian Federation		2	2			8
2.2	Topic 2. Fundamentals of tactics of combined arms units		2	2			8
2.3	Topic 3. Radiation, chemical and biological protection		-	2			10
2.4	Topic 4. Military topography		2	-			10
2.5	Topic 5. Fundamentals of medical care		2	2			10
2.6	Topic 6. Legal training and military-political training		-	2			8
	Total	**72**	**8**	**10**			**54**

3.4 Contents of the discipline

Module 1. Life Safety Topic 1.
Introduction. Man and the Technosphere

Basic concepts and definitions.

Characteristic states of the “human – environment” system: industrial, urban, domestic, natural environment. Human interaction with the environment, principles of optimal interaction: comfort, minimization of negative impacts, sustainable development of the system.

Compliance of living conditions with physiological, physical and mental capabilities of a person. Fundamentals of optimization of living environment parameters (microclimate parameters, illumination, noise, vibration, etc.). Criteria for assessing the impact of discomfort, their significance. Axiom on the potential impact in the “person – living environment” system. Criteria for assessing the negative impact: the number of injured and killed, reduction in life expectancy, material damage and their significance. International cooperation in the field of life safety.

Topic 2. Psychophysiological and ergonomic foundations of safety Main psychological causes of errors and creation of dangerous situations. Engineering psychology. Factors affecting reliability of operators' actions. Types of work activities: physical and mental labor, forms of physical and mental labor, creative work. Classification of working conditions by severity and intensity of the work process. Classification of working conditions by factors of the production environment. Ergonomic foundations of safety. The "man - machine - environment" system. Anthropometric, sensorimotor, energetic, biomechanical and psychophysiological compatibility of man and machine. Organization of the workplace. Work and rest regime, main ways to reduce fatigue and monotony.

Topic 3. Identification of harmful and dangerous environmental factors

Classification of negative factors of natural, anthropogenic and technogenic origin. Harmful and dangerous negative factors. Systems of perception and compensation by the human body of harmful factors of the environment. Maximum permissible levels of dangerous and harmful factors - the main types and principles of establishment.

Parameters, characteristics of the main harmful and hazardous factors of the human environment, the main components of the technosphere and their sources.

Topic 4. Impact of harmful and dangerous environmental factors on humans. Protection of humans and the environment from harmful and dangerous factors of natural, anthropogenic and technogenic origin

The impact of the main negative factors on humans and their maximum permissible levels.

Basic principles of protection against hazards. Systems and methods of protecting humans and the environment from the main types of hazardous and harmful impacts of natural, anthropogenic and man-made origin. Methods of protection from harmful substances, physical fields, information flows, biological and psychological hazards. General characteristics and classification of protective equipment. Methods of control and monitoring of hazardous and harmful factors. Basic principles and stages of control and forecasting. Methods of determining the zones of action of negative factors and their levels.

Protection against industrial vibrations. Basic concepts and definitions. Physical characteristics of vibrations. Causes and sources of vibrations. Effect of vibrations on the human body. Hygienic and technical regulation of vibrations (GOST 12.2.012). Methods and means of protection against vibration (impact on the source of excitation, vibration damping, dynamic vibration damping, passive and active vibration insulation). Personal protective equipment against vibrations. Measurement of vibration parameters.

Protection from industrial noise, infra- and ultrasound. Basic concepts and definitions. Physical characteristics of noise. Noise sources and their classification (GOST 121.1.029). Effects of noise on the human body. Graph of human perception of acoustic sounds. Standardization of noise in the workplace (GOST 12.1.003). Methods and means of protection from industrial noise (sound insulation and sound absorption, noise mufflers). Methods and means of protection from infra- and ultrasound. Noise characteristics of machines. Acoustic calculation.

Protection from EM fields and IR radiation, laser radiation, ionizing radiation radiation. Impact of electromagnetic radiation on humans. Standardization, main characteristics, protection from EM fields, IR radiation, laser and ionizing radiation.

Fundamentals of electrical safety. Basic concepts and definitions. Factors influencing the outcome of electric shock. Effects of electric current on the human body. Classification of premises by electrical safety. Phenomenon of current leakage into the ground. Touch voltage. Step voltage.

Analysis of electrical networks and electric shock in various networks. Protective grounding, neutral grounding, protective shutdown. Static electricity, its effect on humans. Lightning protection.

Safety of production equipment. Ergonomic requirements for equipment. Consideration of safety requirements during production preparation. Protective, warning means, blocking and signaling devices, remote control systems. Safety of functioning of automated and robotic production facilities. Safety in emergency situations. Testing, checking of equipment compliance with safety requirements. Inspection and testing of compressors, overhead cranes and lifts, gas supply systems, heating, ventilation, pressure systems. Ergonomic requirements. Improving safety through functional diagnostics of machines and installations.

Fire safety. Basic concepts and definitions. Dangerous and harmful factors of fires and explosions. Causes of their occurrence. Fire prevention. Fire forecasting. Analysis of combustion termination conditions. Extinguishing means

fires. Their characteristics and scope of application. Fire notification and signaling equipment.

Topic 5. Providing comfortable conditions for human life and activity The relationship between living conditions and health and labor productivity. Comfortable (optimal) living conditions. Climate, air, light, acoustic and psychological environments, the impact of the environment on well-being, health and human performance. Psychophysiological and ergonomic conditions for the organization and safety of labor. Principles, methods and means of organizing comfortable living conditions.

Improving the air environment in industrial premises. Basic concepts and definitions: working area, meteorological conditions and the parameters that determine them. Impact of microclimate parameters on humans. Analysis of heat balance conditions. Standardization of microclimate parameters (GOST 12.1.005). Air pollution in the working area and the impact on the human body. Standardization of the content of harmful substances in the air of the working area. Organization of air exchange in industrial premises. Ventilation system, requirements for ventilation systems. Determining the required amount of air for general exchange and local ventilation. Air conditioning.

Heating of industrial premises.

Industrial lighting. Basic concepts and definitions. Basic lighting quantities and units of measurement. Classification of lighting systems. Requirements for industrial lighting. Electric light sources and lighting devices. Standardization of artificial and natural lighting (SNiP 23-05-95). Personal eye protection equipment. Calculation methods.

Topic 6. Emergencies and methods of protection in the conditions of their implementation Basic concepts and definitions, classification of emergency situations and economic facilities by potential danger. Phases of emergency situation development. Damaging factors of sources of man-made emergencies. Classification of natural disasters (catastrophes), man-made accidents. Characteristics of damaging factors of natural emergencies. Man-made accidents - their features and damaging factors. Peacetime and wartime emergencies and their damaging factors. Types of weapons of mass destruction, their features and consequences of their use. Terrorism and terrorist acts. Methods of forecasting and assessing the situation in emergency situations. Sustainability of economic facilities in emergency situations. Principles and methods for increasing the sustainability of facilities in emergency situations. Fundamentals of organizing the protection of the population and personnel in peacetime and wartime, protection methods, protective structures, their classification. Organization of evacuation of the population and personnel from emergency zones. Medical care measures. Personal protective equipment and the procedure for its use. Fundamentals of organizing emergency rescue operations.

Topic 7. Life safety management

Legislative and regulatory legal framework for life safety management. Systems of legislative and regulatory legal acts governing environmental, industrial, production safety and safety in emergency situations, civil defense. Characteristics of the main legislative and regulatory legal acts: purpose, objects of regulation and basic provisions. Economic foundations of safety management. Modern market methods of economic regulation of various aspects of safety: positive and negative methods of stimulating safety. The concept of economic damage, its components and methodological approaches to assessment. Material liability for violation of environmental, industrial and production safety requirements. Risk insurance: environmental insurance, liability insurance of owners of hazardous

industrial facilities, professional risk insurance, social insurance Basic concepts, functions, tasks and principles of risk insurance. State security management bodies: management, supervision and control bodies for safety, their main functions, rights and obligations, structure. The RSChS and civil defense system.

Corporate management in the field of environmental safety, working conditions and workers' health: main tasks, principles and management systems (environmental management, occupational safety and workers' health management).

Module 2. Fundamentals of military training

Topic 1. General military regulations of the Armed Forces of the Russian Federation

General military regulations of the Armed Forces of the Russian Federation, their main requirements and content.

The structure, requirements and main content of general military regulations.

Rights of military personnel. General duties of military personnel. Military ranks. Unity of command. Superiors and subordinates. Seniors and juniors. Order and command. The procedure for giving and carrying out orders. Military courtesy and military discipline of military personnel.

Internal order and daily routine.

Accommodation of military personnel. Time distribution and internal order. Daily outfit of the company, its purpose, composition. Orderly, duty officer of the company. Distribution of daily outfit.

General provisions of the Charter of garrison and guard service.

General Provisions of the Charter of Garrison and Guard Service. Duties of the guard and sentry.

Topic 2. Fundamentals of tactics of combined arms units

The Armed Forces of the Russian Federation, their composition and tasks. Tactical and technical characteristics (TTC) of the main types of weapons and equipment of the RF Armed Forces.

Fundamentals of combined arms combat.

The essence of modern combined arms combat, its characteristics and types. Methods of conducting modern combined arms combat and means of armed struggle.

Fundamentals of engineering support.

Objectives and main tasks of engineering support of units and subdivisions. Purpose, classification of engineering ammunition, engineering obstacles and their characteristics. Field fortifications: trench, trench, communication passage, shelters, refuges.

Organization of military units and subdivisions, weapons, combat equipment of a potential enemy.

Topic 3. Radiation, chemical and biological protection

Nuclear, chemical, biological, incendiary weapons.

Nuclear weapons. Means of their use. Damaging factors of a nuclear explosion and their impact on the human body, weapons, equipment and fortifications. Chemical weapons. Toxic substances (TS), their purpose, classification and impact on the human body. Combat conditions, means of use, signs of the use of TS, their stability on the ground. Biological weapons. Main types and damaging effect. Means of use, external signs of use. Incendiary weapons. Damaging effects of incendiary weapons on personnel, weapons and military equipment, means and methods of protection against them.

Radiation, chemical and biological protection.

Purpose, tasks and activities of NBC protection. Special treatment activities: degassing, decontamination, disinfection, sanitary treatment. Purposes and procedure for conducting

partial and complete special treatment. Technical means and devices for radiation, chemical and biological protection.

Personal protective equipment and the procedure for its use. Fitting and technical testing of personal protective equipment.

Topic 4. Military topography

Terrain as an element of combat situation. Measurements and orientation on the terrain without a map, movement by azimuths.

Terrain as an element of combat situation. Methods of orientation on the terrain without a map. Methods of measuring distances. Movement by azimuths.

Topic 5. Fundamentals of medical care

Medical support for troops (forces), first aid for injuries, injuries and special cases.

Medical support - as a type of comprehensive support for troops. Duties and equipment of officials of the medical service of the tactical level in combat. General rules for self-help and mutual assistance. First aid for wounds and injuries. First aid for injuries caused by toxic substances, bacteriological agents. Contents of pre-hospital care.

Topic 6. Legal training and military-political training

Military Doctrine of the Russian Federation. Legislation of the Russian Federation on military service.

Main provisions of the Military Doctrine of the Russian Federation. Legal basis of military duty and military service. Concept of military service, its types and their characteristics. Responsibilities of citizens for military registration.

Russia in the modern world. The main directions of socio-economic, political and military-technical development of the country.

New trends and features of development of modern international relations. Place and role of Russia in a multipolar world. Main directions of socio-economic, political and military-technical development of the Russian Federation.

Goals, objectives, directions and forms of military-political work in the unit, requirements of governing documents.

3.5 Topics of seminars/practical and laboratory classes

3.5.1. Seminars/practical classes

Module 1. Life safety

Topic 3. Identification of harmful and dangerous factors of the environment Topic 4.

Impact of harmful and dangerous factors of the environment on humans. Protection of humans and the environment from harmful and dangerous factors of natural, anthropogenic and technogenic origin

Topic 5. Providing comfortable conditions for human life and activity

Module 2. Fundamentals of military training

Topic 1. General military regulations of the Armed Forces of the Russian Federation

Topic 2. Fundamentals of tactics of combined arms units

Topic 3. Radiation, chemical and biological protection Topic 4. Military topography

Topic 5. Fundamentals of medical care

Topic 6. Legal training and military-political training

3.5.2. Laboratory exercises

Module 1. Life safety

Topic 3. Identification of harmful and dangerous factors of the environment

Laboratory work 1. Research and calculation of artificial and natural lighting

Laboratory work 2. Study of meteorological conditions in the workplace Topic 4. Impact of harmful and dangerous environmental factors on humans. Protection of humans and the environment from harmful and dangerous factors of natural, anthropogenic and technogenic origin

Lab 3. Noise protection in the workplace

3.6 Topics of course projects (course papers) Not provided.

4. Educational, methodological and informational support

4.1 Regulatory documents and GOSTs

1. SanPiN 2.1.3684-21 "Sanitary and epidemiological requirements for the maintenance territories of urban and rural settlements, to water bodies, drinking water and drinking water supply, atmospheric air, soils, residential premises, operation of industrial and public premises, organization and implementation of sanitary and anti-epidemic (preventive) measures."

URL:https://www.rospotrebnadzor.ru/files/news/SP2.1.3684-21_territorii.pdf

4.2 Main literature

1. Life safety: textbook [Electronic resource]. - M .: "Dashkov and Ko», 2015. – 453 p.

URL:http://www.knigafund.ru/books/211914

4.3 Further reading

1. Aizman R.I., Shirshova V.M., Shulenina N.S. Fundamentals of Security life activity: a tutorial. [Electronic resource]/R.I. Aizman, V.M. Shirshova, N.S. Shulenina. - Siberian University Publishing House, 2010. - 256 p.

URL:http://www.knigafund.ru/books/178627

4.4 Electronic educational resources

1. EOR "Life Safety"

URL:https://online.mospolytech.ru/course/view.php?id=2254

4.5 Licensed and freely distributed software security

Not provided.

4.6 Modern professional databases and information reference systems

1. Consultant Plus
URL:https://www.consultant.ru/
2. Information network "TechExpert"
URL:https://cntd.ru/

5. Logistics

Lectures are held in general university auditoriums, where films, slides or handouts are shown. Laboratory work is conducted in specialized auditoriums, where laboratory installations and equipment are located (Av-5213, Av-5207).

	Laboratory work	Laboratory equipment
1	Study meteorological conditions at the workplace	Laboratory setup with devices. Aspiration psychrometer MV-4M, anemometer electronic With winged sensor, measuring device air environment parameters "Meteoscope
2	Research and calculation artificial lighting	Laboratory stand "Efficiency and quality of lighting" BZh1M2, Combined device "TKA-PKM" Pulse meter + Luxmeter
3	Measurement noise on workplaces	Sound level meter VSHV-003.

6. Methodological recommendations

6.1 Methodological recommendations for the teacher on the organization training

The main requirement for teaching the discipline is a creative, problem-based dialogue approach, which allows increasing students' interest in the content of the educational material.

The main form of studying and consolidating knowledge in this discipline is lectures, laboratory and practical. The teacher must consistently read a series of lectures to students, during which attention should be focused on the key points of specific theoretical material, and also organize practical classes in such a way as to activate students' thinking, stimulate their independent extraction of necessary information from various sources, comparative analysis of solution methods, comparison of the results obtained, formulation and argumentation of their own views on many controversial issues.

Lectures form the basis of the academic classes in the discipline. In the process of teaching students, various types of academic classes (classroom and extracurricular) are used: lectures, seminars, laboratory work, consultations, etc. In the first lesson in this academic discipline, it is necessary to familiarize students with the procedure for studying it,

to reveal the place and role of the discipline in the system of sciences, its practical significance, to convey to students the requirements of the department, to answer questions.

When preparing for lectures on the course "Life Safety", it is necessary to think over the plan for its implementation, the content of the introductory, main and final parts of the lecture, familiarize yourself with the latest educational and methodological literature, periodical publications on the topic of the lecture, determine the means of material and technical support for the lecture and the procedure for their use during the lecture. Clarify the plan for conducting a practical lesson on the topic of the lecture.

During a lecture, the teacher must name the topic, the study questions, and familiarize students with the list of primary and secondary literature on the topic of the lesson.

In the introductory part of the lecture, justify the place and role of the topic being studied in the academic discipline, and reveal its practical significance. If this is not the first lecture, then it is necessary to link its topic with the previous one, without violating the logic of the presentation of the educational material. The lecture should begin only by clearly defining its nature, topic, and range of issues that will be considered during it.

The main part of the lecture should cover the content of the educational issues, focus students' attention on the main categories, phenomena and processes, and the peculiarities of their course. Reveal the essence and content of various points of view and scientific approaches to explaining certain phenomena and processes. You should substantiate your own position on controversial theoretical issues. Give examples. Ask rhetorical questions during the presentation of the lecture material and answer them yourself. This helps to activate the students' thinking, increase their attention and interest in the lecture material and its content. The teacher should guide students in taking notes on the lecture material, emphasize the need to reflect the main provisions of the topic being studied in the notes, especially highlighting the categorical apparatus.

In the final part of the lecture, it is necessary to formulate general conclusions on the topic, revealing the content of all the questions posed in the lecture. Announce the plan of the next seminar or laboratory lesson, give brief recommendations on how to prepare students for the seminar or laboratory work. Determine the place and time of consultation for students who wish to present reports and essays on current issues of the topic under discussion at the seminar.

The purpose of practical and laboratory classes is to ensure control over the assimilation of educational material by students, expansion and deepening of knowledge obtained by them in lectures and during independent work. Increasing the effectiveness of practical classes is achieved by creating a creative environment that encourages students to express their own views and judgments on the issues discussed, and the desire of students to work at the board when solving problems.

After each lecture, laboratory and practical lesson, make a corresponding entry in the students' attendance logs, find out from the heads of study groups the reasons for students' absence from classes. Conduct group and individual consultations with students on issues that arise in the course of their preparation for the current and midterm assessment in the academic discipline, recommend educational and other materials as well as reference literature to help.

The grade is assigned by the teacher and announced after the answer. The teacher who accepts the test or exam is personally responsible for the correctness of the grade.

6.2 Methodological instructions for students on mastering the discipline

The student's work is aimed at:

• study of theoretical material, preparation for practical classes, laboratory classes and the implementation of practical work and laboratory work.

• preparation and execution of testing using general education portal

• writing and defending an abstract on the proposed topic

Independent work of students is the most important link in the educational process, without the correct organization of which the student cannot be a highly qualified graduate.

The student should remember that independent studies should begin from the first semester and be done regularly. It is very important to make maximum efforts and willpower to force yourself to work at full capacity from the first day.

You should not put off work because of a non-working mood or lack of inspiration. You need to create your own mood. Understanding the need to do the work, knowing the goal, understanding the prospects have a positive effect on your mood.

Each student should plan their own independent work based on their capabilities and priorities. This stimulates the completion of work, creates a calmer environment, which ultimately has a positive effect on the assimilation of the material.

It is important to take into account the circumstances of your work more fully, to understand what is most important at this stage, what sequence of work to choose in order to do it better and with the least expenditure of time and energy.

For productive work, the environment and organization of the workplace are of great importance. It is necessary to ensure that the place of work is, if possible, permanent. Working in a familiar place makes it more productive. Productivity of work depends on the correct alternation of work and rest. Therefore, every hour or two you should take a break for 10-15 minutes. It is better to devote weekends to active rest, sports, walks in the fresh air, etc. Even switching from one type of mental work to another can serve as active rest.

The student must remember that independent work with a book plays a vital role in the learning process. Learning to work with a book is the most important task for a student. Without this skill, it will be extremely difficult to study the program material, and a lot of time will be wasted irrationally. Working with a book consists of the ability to select the necessary books, understand them, take notes, choose the main thing, learn and apply in practice.

7. Evaluation Fund

7.1 Methods of monitoring and assessing learning outcomes

Before the date of the midterm assessment, the student must complete all the work provided for by this work program of the discipline. The list of mandatory work and the reporting form are presented in the table.

List of mandatory work performed during the semester in the discipline "Life Safety"

Type of work	Form of reporting and current control
Laboratory works	Completed reports (journal) of laboratory work provided for by the work program of the discipline with a mark

	The teacher gives a “pass” if all the work has been completed and formatted.
Abstract	Submit one abstract on the chosen topic with the teacher’s grade of “passed” if one abstract is submitted in the form of a presentation and on paper.
Testing	Grade teacher "passed" If result testing on the scale (Appendix B) is more than 41%.

7.2 Scale and criteria for assessing learning outcomes

7.2.1. Essay grading scale

Rating scale	Description
Great	All requirements for writing and defending an abstract have been met: the problem has been identified and its relevance has been substantiated, a brief analysis of various points of view on the problem under consideration has been made and one's own position has been logically stated, conclusions have been formulated, the topic has been fully disclosed, the volume has been maintained, the requirements for external design have been met, and correct answers have been given to additional questions.
Fine	The main requirements for the abstract and its defense have been met, but some shortcomings have been made. In particular, there are inaccuracies in the presentation of the material; there is no logical sequence in the judgments; the volume of the abstract has not been maintained; there are omissions in the design; additional questions during the defense were given incomplete answers.
Satisfactorily	There are essential retreats from requirements To abstracting. In particular, the topic is covered only partially; factual errors were made in the content of the abstract or when answering additional questions; there is no conclusion during the defense.
Unsatisfactory	The topic of the abstract is not disclosed, and a significant misunderstanding of the problem is revealed.

7.2.2. Testing assessment scale

The test result is assessed on a percentage scale.

Grade	Number of correct answers
Great	from 81% to 100%
Fine	from 61% to 80%
satisfactorily	from 41% to 60%
unsatisfactory	40% or less correct answers

7.2.2. Description of indicators and criteria for assessing the competencies formed based on the results of mastering the discipline (module), description of the assessment scales.

The indicator for assessing competencies at various stages of their formation is the achievement by students of the planned learning outcomes in a discipline (module).

Indicator	Not accepted	passed
know: factors harmful effects on life activity elements of the living environment (technical means, technological processes, materials, buildings and structures, natural and social phenomena), and also dangerous and harmful factors within the framework carried out activities	Student demonstrates complete absence or insufficient correspondence following knowledge: factors harmful influences on life activity elements Wednesday habitat (technical funds, technological processes, materials, buildings and structures, natural And social phenomena), and Also dangerous And harmful factors V within the framework of the ongoing activities.	Student demonstrates complete correspondence following knowledge: factors harmful influence on the vital activity of elements Wednesday habitat (technical funds, technological processes, materials, buildings And structures, natural And social phenomena), as well as dangerous and harmful factors within the framework carried out activities, free operates acquired knowledge.
be able to: apply methods of maintenance safe working and living conditions, conservation of natural environments to ensure sustainable development society, including in the event of a threat of occurrence dangerous or emergency situations and military conflicts	Student can't or in insufficient degree knows how to apply methods of maintenance safe conditions labor and life activity, conservation of natural environments to ensure sustainable development society, including when threatened the emergence of dangerous or emergency.	Student demonstrates full compliance with the following skills: apply methods to maintain safe working conditions and life activities, preservation of the natural environment for ensuring sustainable development of society, including in the event of a threat of dangerous or emergency situations.
own: - skills clarification of rules behavior when	Student does not possess or to an insufficient degree has the skills	Fully trained volume owns skills clarifications rules behavior at emergence

emergence emergency situations natural and man-made origin and military conflicts, descriptions ways to participate in restorative events	clarification of rules behavior when emergence emergency situations of natural and man-made origin and military conflicts, descriptions of methods participation in restorative events.	emergency situations natural Andman-made origin and military conflicts, descriptions of ways to participate in recovery activities.

7.3 Evaluation tools

7.3.1. Current control

7.3.1.1. Topics of papers on the subject "Life Safety"

1. Subject, purpose and tasks of life safety. Axioms about potential danger of
2. the technosphere. Basic concepts and classification of risk. Acceptable risk.
3. Principles, methods and means of ensuring safety. Protection when
4. working with vessels operating under pressure. Characteristics of the
5. main forms of human activity. Human reliability
6.

as a link in a complex technical system.

7. Production environment and working conditions. Hazardous and harmful production factors. Classification.

8. Industrial injuries, main causes of industrial injuries traumatism.

9. Investigation and recording of accidents. Quantitative characteristics traumatism.

10. Pollution of air in the working area of the production facility. Impact harmful substances on the human body.

11. Standardization of the content of harmful substances in the air of industrial premises. Classification of harmful substances.

12. Microclimate parameters and their impact on the human body. Standardization microclimate parameters.

13. Heat exchange between humans and the environment.

14. Methods of protection from sources of radiant heat.

15. Definition and types of ventilation. Requirements for the ventilation system.

16. Types of natural ventilation. The essence of aeration. Calculation of aeration.

17. Determination of air consumption during aeration. Advantages and disadvantages aeration.

18. Types of mechanical ventilation. Schemes.

19. Local ventilation.

20. Methods for calculating the amount of air for general exchange ventilation.

21. Heating and air conditioning.

22. Tasks and classification of industrial lighting. Requirements for the system lighting.

23. Lighting characteristics of lighting. Standardization of artificial lighting.

24. Types of lamps. Their characteristics and functions.

25. Methods for calculating artificial lighting.

26. Types of natural industrial lighting. Calculation methods.

27. Noise. Basic characteristics of noise.

28. Noise classification (GOST 12.1.003). Effect of noise on the human body.

29. Noise regulation.

30. Methods and means of noise protection.

31. Methods of sound insulation and sound absorption.

32. Sources of infra- and ultrasound. Protection methods.

33. Definition of vibration. Sources and causes of vibration. Vibration classification (GOST 12.1.012).

34. Physical characteristics of vibration.

35. Effect of vibration on the human body. Technical and hygienic vibration standardization (GOST 12.1.012).

36. Methods of protection against vibration.

37. Methods of vibration damping and vibration isolation.

38. Types of effects of electric current on the human body. Types electrical injuries.

39. Factors influencing the outcome of electric shock to a person. Helping a person exposed to electric current.

40. The main causes of electric shock to humans at work. Classification of industrial premises according to the degree of danger of electric shock.

41. Phenomena when electric current flows into the ground. Potential distribution on the surface of the earth.

42. Touch voltage. Step voltage.

43. Types of electrical networks. Analysis of electric shock in electrical networks.

44. Methods of protection against electric shock.

45. Protective grounding. Types of grounding devices. Standardization resistance of grounding devices in electrical networks.

46. Protective grounding. Protective shutdown.

47. Protection from infrared and ultraviolet radiation.

48. Protection when working with lasers.

49. Protection from electromagnetic radiation.

50. Fire prevention. Measures taken to prevent fires at enterprises.

51. Combustion process. Factors necessary for the combustion process.

52. Categories of enterprises by fire hazard. Fire resistance and limit fire resistance of structures.

53. Fire prevention measures that are carried out during design industrial facility.

54. Fire extinguishing agents. Fire extinguishing agents.

55. Fire alarm.

56. Types and indicators of emergency situations.

57. General information about means of destruction during military operations.

58. Stability of functioning of economic facilities in emergency situations situations.

59. Basic methods of protecting the population in emergency situations.

60. Elimination of consequences of emergency situations.

61. Life safety management. State and public supervision of the state of labor protection.

62. Organization of labor safety in production.

63. Occupational safety standards system.

64. Organization of certification of workplaces according to working conditions.

65. Costs of protective measures for occupational safety.

7.3.1.2. Example of test tasks:

1. By definition, “Life safety is the science of comfortable and safe interaction of man with....»:

a) technosphere;

b) the production environment; c) the living environment;

d) nature.

2. By definition, “Security is a state of a protected object in which the impact on it of all flows of matter, energy and information does not exceed .....»:

a) limit values;

b) maximum permissible values; c) minimum permissible values; d) known values.

3. According to the definition, “An emergency situation (ES) is a condition in which as a result of the emergence of a source of an emergency situation at a facility, a certain territory or water area, people’s activities are disrupted, their lives and health are threatened, and damage is caused to the property of the population, the national economy and the environment”:

a) optimal living conditions; b) normal living conditions; c) minimum living conditions; d) normal living conditions.

7.3.2. Interim assessment

7.3.2.1. Questions for the test on the module "Life Safety":

1. Subject, purpose and tasks of life safety. Axioms about potential danger of
2. the technosphere. Basic concepts and classification of risk. Acceptable risk.
3. Principles, methods and means of ensuring safety. Protection when working
4. with vessels operating under pressure. Characteristics of the main forms of
5. human activity. Human reliability
6. as a link in a complex technical system.

7. Production environment And conditions labor. Dangerous And harmful production factors. Classification.

8. Industrial injuries, main causes of industrial injuries traumatism.

9. Investigation and recording of accidents. Quantitative characteristics traumatism.

10. Pollution of air in the working area of the production facility. Impact harmful substances on the human body.

11. Standardization of the content of harmful substances in the air of industrial premises. Classification of harmful substances.

12. Microclimate parameters and their impact on the human body. Standardization microclimate parameters.

13. Heat exchange between humans and the environment.

14. Methods of protection from sources of radiant heat.

15. Definition and types of ventilation. Requirements for the ventilation system.

16. Types of natural ventilation. The essence of aeration. Calculation of aeration.

17. Determination of air consumption during aeration. Advantages and disadvantages aeration.

18. Types of mechanical ventilation. Schemes.

19. Local ventilation.

20. Methods for calculating the amount of air for general exchange ventilation.

21. Heating and air conditioning.

22. Tasks and classification of industrial lighting. Requirements for the system lighting.

23. Lighting characteristics of lighting. Standardization of artificial lighting.

24. Types of lamps. Their characteristics and functions.

25. Methods for calculating artificial lighting.

26. Types of natural industrial lighting. Calculation methods.

27. Noise. Basic characteristics of noise.

28. Noise classification (GOST 12.1.003). Effect of noise on the human body.

29. Noise regulation.

30. Methods and means of noise protection.

31. Methods of sound insulation and sound absorption.

32. Sources of infra- and ultrasound. Protection methods.

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48. Protection when working with lasers.

49. Protection from electromagnetic radiation.

50. Fire prevention. Measures taken to prevent fires at enterprises.

51. Combustion process. Factors necessary for the combustion process.

52. Categories of enterprises by fire hazard. Fire resistance and limit fire resistance of structures.

53. Fire prevention measures that are carried out during design industrial facility.

54. Fire extinguishing agents. Fire extinguishing agents.

55. Fire alarm.

56. Types and indicators of emergency situations.

57. General information about means of destruction during military operations.

58. Stability of functioning of economic facilities in emergency situations situations.

59. Basic methods of protecting the population in emergency situations.

60. Elimination of consequences of emergency situations.

61. Life safety management. State and public supervision of the state of labor protection.

62. Organization of labor safety in production.

63. Occupational safety standards system.

64. Organization of certification of workplaces according to working conditions.

65. Costs of protective measures for occupational safety.

7.3.2.2. Question for the test on the module "Basics of military training"

1. General military regulations of the Armed Forces of the Russian Federation, their main requirements and content.

2. Rights of military personnel. General duties of military personnel.

3. Military ranks. Unity of command. Chiefs and subordinates. Senior and Junior. Order and command.

4. The order of giving and carrying out orders. Military politeness and military discipline of military personnel.

5. Internal order and daily routine.

6. Accommodation of military personnel. Time distribution and internal order. Daily outfit of the company, its purpose, composition.

7. Orderly, duty officer for the company. Distribution of the daily duty.

8. Fundamentals of tactics of combined arms units

9. The Armed Forces of the Russian Federation, their composition and tasks. Tactical-technical characteristics (TTX) of the main types of weapons and equipment of the RF Armed Forces.

10. Tactical and technical characteristics of the main types of weapons and equipment of the Russian Armed Forces.

11. Fundamentals of combined arms combat.

12. The essence of modern combined arms combat, its characteristics and types. Methods of conducting modern combined arms combat and means of armed struggle.

13. Fundamentals of engineering support.

14. Objectives and main tasks of engineering support for units and subdivisions. Purpose, classification of engineering ammunition, engineering obstacles and their characteristics. Field fortifications: trench, trench, communication trenches, shelters, refuges.

15. Organization of military units and subdivisions, weapons, military equipment potential enemy.

16. Nuclear, chemical, biological, incendiary weapons.

17. Nuclear weapons. Means of their use. Damaging factors of nuclear weapons. explosions and their impact on the human body, weapons, equipment and fortifications.

18. Chemical weapons. Toxic substances (TS), their purpose, classification and impact on the human body. Combat conditions, means of application, signs of application of toxic agents, their stability on the ground.

19. Biological weapons. Main types and destructive effect. Means application, external signs of application. Incendiary weapons. Damaging effects of incendiary weapons on personnel, weapons and military equipment, means and methods of protection against them.

20. The purpose, tasks and measures of NBC protection. Special processing measures: degassing, decontamination, disinfection, sanitary treatment. Objectives and procedure for partial and complete special treatment. Technical means and devices for radiation, chemical and biological protection.

21. Personal protective equipment and the procedure for its use. Fitting and technical inspection of personal protective equipment.

22. Terrain as an element of the combat situation. Measurements and orientation on areas without a map, movement by azimuths.

23. Terrain as an element of the combat situation. Methods of orientation on terrain without a map. Methods of measuring distances. Movement by azimuths.

24. Topographic maps and their reading, preparation for work. Definition coordinates of objects and target designation on the map.

25. Geometric essence, classification and purpose of topographic maps. Determination of geographic and rectangular coordinates of objects on the map. Target designation on the map.

26. Medical support of troops (forces), first medical aid in case of injuries, trauma and special cases.

27. Medical support - as a type of comprehensive support for troops. Duties and equipment of tactical medical service officials in combat.

28. General rules for providing self-help and mutual assistance. First aid in case of wounds and injuries.

29. First aid for poisoning, bacteriological means. Contents of pre-hospital care measures.

30. Military-political training

31. Russia in the modern world. The main directions of socio-economic, political and military-technical development of the country.

32. New trends and features of the development of modern international relations. The place and role of Russia in a multipolar world. The main directions of socio-economic, political and military-technical development of the Russian Federation.

33. Objectives, tasks, directions and forms of military-political work in division, requirements of governing documents.

34. Military Doctrine of the Russian Federation. Legislation of the Russian Federation on military service.

35. Basic provisions of the Military Doctrine of the Russian Federation. Legal the basis of military duty and military service. The concept of military service, its types and their characteristics. Responsibilities of citizens for military registration.