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Higher and Postgraduate Educational Programs

☐ Project EP ☐ Participant of project EP

Date of registration in the Registry

23.07.2019

Registration number

6B11200019

Date of EP passport updating

03.08.2026 10:56

Field of education

6B11 Services

Direction of personnel training

6B112 Hygiene and labor protection at work

Group of educational programs

B094 Sanitary preventive measures

Educational program

6B11201 Life Safety and Environment Protection

EP purpose

Training of qualified specialists in the field of rescue, emergency work during emergency situations, labor protection, upbringing, life safety and the environment, competitive in the labor market, able to use systematic theoretical and responsible for the results of their professional activities.

EP type

Acting EP

Level on NQF

6

Level on SQF

6

EP distinctive features

No

Language of education

Russian

Kazakh

Professional Standard for EP

Exists

№	Name of professional standard
1	Activities of ensuring safety during emergencies

Professional standards (career standards)

Professional standard has been used at developing EP



Professional standard №1

Professional standard

Безопасность и охрана труда



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CCEA

Professions

Profession №1

Profession

Инженер по безопасности и охране тр

Уровень по ОРК

6

Labor functions

Обеспечение эффективного функционирования системы управления безопасностью

Участие в организации и проведении обучения и повышения квалификации работников

Сбор, обработка и передача информации по вопросам обеспечения безопасных усло

Контроль за нормативным обеспечением и соблюдением в подразделениях организа

Контроль за нормативным обеспечением и соблюдением в подразделениях организа

Организация, подготовка и проведение мероприятий, направленных на контроль и сн

Участие в организации контроля за нормативным обеспечением и соблюдением в по

Методическое обеспечение процесса обучения

Участие в обеспечении внутренней

Обеспечение расследования и учета несчастных случаев на производстве и професс

Volume of the credits

240

Degree to be conferred

Bachelor

Period of study

4

Date of approval EP on the Academic Council

27.04.2026

☒Existence of the annex to the license for the direction of personnel training

The license number on the direction of training

KZ49LAM00007465

☐The training format is online

☒EP accreditation existence

Atlas of new professions

не предусмотрено

Regional standard

не предусмотрено

The formed educational outcomes

№	Educational outcome	Code	Reflects the labor function
1	Apply the	ON'	Контроль за нормативным обеспечением и соблюдением в подразделениях организации : Участие в организации контроля за нормативным обеспечением и соблюдением в подраз, Контроль за нормативным обеспечением и соблюдением в подразделениях организации :
2	Plan, organiz	ON:	Сбор, обработка и передача информации по вопросам обеспечения безопасных условий т
3	Identify hazardo	ON:	Организация, подготовка и проведение мероприятий, направленных на контроль и снижен

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4	Apply mathem	ON	Сбор, обработка и передача информации по вопросам обеспечения безопасных условий т
5	Assess the	ON	Обеспечение расследования и учета несчастных случаев на производстве и профессиона Участие в обеспечении внутреннего контроля за состоянием безопасности и охраны труда
6	Organiz e and	ON	Обеспечение эффективного функционирования системы управления охраной труда органи Контроль за нормативным обеспечением и соблюдением в подразделениях организации : Контроль за нормативным обеспечением и соблюдением в подразделениях организации :
7	Monitor complia	ON	Контроль за нормативным обеспечением и соблюдением в подразделениях организации : Участие в обеспечении внутреннего контроля за состоянием безопасности и охраны труда Контроль за нормативным обеспечением и соблюдением в подразделениях организации :
8	Organiz e	ON	Методическое обеспечение процесса обучения Организация и проведение обучения и Обучение, повышение квалификации работников и оценка их знаний Участие в организа
9	Use collecti	ON	Организация, подготовка и проведение мероприятий, направленных на контроль и снижен
10	Make organiz	ON	Обеспечение эффективного функционирования системы управления безопасностью и охр Сбор, обработка и передача информации по вопросам обеспечения безопасных условий т Контроль за нормативным обеспечением и соблюдением в подразделениях организации :
11	Evaluat e and	ON	Методическое обеспечение процесса обучения

Data on disciplines

Nº	Name of discipline	Short description of discipline	Cycle
1	Fundamentals of Financial Literacy	The course is aimed at gaining knowledge and skills in the field of personal finance management. Also, as part of the course, students will learn how to use in practice all kinds of tools in the field of finance, save and increase savings, plan a budget competently, learn how to analyze financial information and navigate financial products to choose an adequate investment strategy.	GED
2	Fundamentals of Scientific Research	The course aims to develop knowledge of the principles, technologies, practical methods, and techniques of conducting scientific research based on the latest scientific achievements. It develops the foundations of scientific culture, academic integrity, and research ethics, as well as the ability to critically analyze scientific texts, effectively apply acquired knowledge in planning and organizing research activities, and analyze and summarize research findings.	GED
3	Ilyastanu	The purpose of the discipline is to develop a deep-thinking personality with high aesthetic taste, appreciating literature, art, traditions, culture and language of the Kazakh people through a deep and comprehensive study of the works of Ilyas Zhansugurov. Forms an understanding of the importance of the works of Ilyas Zhansugurov in the development of the Kazakh literary language; skills of intellectual and creative thinking, the ability to cherish the values of national and spiritual heritage.	GED
4	Basics of Law and Anti-Corruption Culture	The aim is to familiarize students with the main branches and institutions of law, the basics of an anti-corruption culture, as well as the laws of the emergence, development and functioning of the state and law. The course forms the skills of an anti-corruption culture and a high level of theoretical knowledge about the main functions of law in the state and society, its impact on the development of law-based state, civil society.	GED

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5	Ecology and Life Safety Basics	allowing to analyze environmental processes, assess the socio-ecological consequences of anthropogenic activities, methods and technologies of protection in emergency situations. Develops skills to assess the impact of environmental factors on human health; predict environmental processes for planning and implementing measures to improve life safety; make decisions in adverse environmental and emergency situations, taking into account the possible consequences of accidents, catastrophes, natural disasters.	GED
6	Economics and Entrepreneurship	The purpose is to familiarize students with the economic problems of modern society, the formation of economic thinking and gaining knowledge in the field of theoretical foundations and practical skills in the field of entrepreneurship. It is focused on the formation of students' comprehensive understanding of the laws of the functioning of the economy, obtaining business education aimed at acquiring applied competencies in various fields of entrepreneurial activity, reveals the features of creating and successfully running their own business.	GED
7	Introduction to the Specialty "Life Safety and Environment Protection"	The course is aimed at developing an understanding of the professional activities of specialists in occupational safety, life safety and environmental protection. The course covers the regulatory framework of professional practice, as well as modern requirements for occupational and environmental safety. It develops an understanding of professional ethics, academic integrity, inclusive culture, and the principles of sustainable development as the foundation of professional practice.	BD
8	Organization of Civil Defense	The discipline is aimed at studying the organization of civil defense and the planning and implementation of measures to protect the population and territories from natural and man-made emergencies. The course covers the organization of civil defense authorities and forces, the development of emergency response plans, coordination of actions, personnel training and exercises, as well as the application of regulatory requirements in the field of civil protection.	BD
9	Labour Protection	The discipline is aimed at studying the occupational safety and health management system at an enterprise. The course covers methods for hazard identification, occupational risk assessment, investigation of workplace accidents and occupational diseases, organization of internal control, development of preventive measures, and ensuring compliance with the legislation of the Republic of Kazakhstan in the field of occupational safety and health.	BD
10	Fundamentals of Artificial Intelligence	The discipline is aimed at studying modern artificial intelligence technologies, data analytics, and digital tools for solving life safety problems, forecasting occupational risks, monitoring working conditions, and providing information and analytical support for the occupational safety and health management system.	BD
11	Engineering Systems, Networks and Equipment	This discipline is aimed at studying the structures of the main structures of engineering systems, networks and equipment. The role and importance of engineering equipment and technologies are considered. In the course of the discipline, the device of heating systems, characteristics and features of water supply, sanitation and gas supply systems are analyzed, the main structures of engineering networks, heat supply, gas supply, water supply and sanitation are compared.	BD
12	Environmental Monitoring	This discipline provides an assessment of objects and types of monitoring, general requirements for the stages of environmental monitoring, analyzes the main patterns of environmental monitoring and control, the essence, specifics and properties of monitoring types, features of the organization of monitoring at different hierarchical levels, methods and tools for collecting geoecological data.	BD



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13	Mathematics	laws of nature corresponding to them, methods of physical research: experience, hypothesis, experiment. The discipline gives an idea of the stages of the development of physics: from mechanics to the theory of the electromagnetic field, quantum representations, the creation of the theory of relativity and quantum mechanics, the role of physics in the creation and development of new branches of engineering and technology.	BD
14	Fundamentals of Electrical Engineering and Electrical Safety of Industrial Facilities	The discipline studies the basic laws of electrical engineering, the principles of operation of electrical equipment, the rules of their operation and maintenance, the effect of electric current on the human body, actions in case of electric shock, as well as the requirements of electrical safety in production..	BD
15	Natural and Man-Made Emergencies	The discipline is aimed at studying the causes, classification, and consequences of natural and man-made emergencies. The course covers methods for forecasting and risk assessment, the organization of emergency prevention and response measures, analysis of accident causes, managerial decision-making, and ensuring the safety of the population and employees.	BD
16	Life Safety	The discipline contains an analysis of the organizational and theoretical foundations of life safety, emergencies, accidents, natural disasters and catastrophes, the dangers of the human environment. It contains the characteristics of the lesions, methods of protecting the population, the stability of the work of industrial facilities, rescue operations in the lesions.	BD
17	Theory and Methodology of Life Safety Training	The discipline is aimed at studying modern methods of training, instruction, professional development, and knowledge assessment in the fields of life safety and occupational safety and health. The course covers the development of educational and methodological materials, the organization of training for different categories of employees, and the evaluation of the effectiveness of the educational process.	BD
18	Collective and Individual Means of Protection	The discipline is aimed at developing knowledge of collective and personal protective equipment, as well as practical skills necessary for preserving the life and health of victims in cases of injuries, emergencies, accidents, and sudden illnesses. Within the course, students study response measures and assistance algorithms designed to save lives, prevent complications, and minimize the consequences of various types of injuries and health-related emergencies.	BD
19	Physics	It contains the basics of the forms of motion of matter and the general laws of nature corresponding to them, methods of physical research: experience, hypothesis, experiment. The discipline gives an idea of the stages of the development of physics: from mechanics to the theory of the electromagnetic field, quantum representations, the creation of the theory of relativity and quantum mechanics, the role of physics in the creation and development of new branches of engineering and technology.	BD
20	Fundamentals of Chemical and Biological Safety	This discipline is aimed at the formation of knowledge of the general provisions of chemical and biological safety, the types of action of chemical, biological toxic substances. The course classifies chemical poisons by the type of poisoning effect, origin and application, reveals the differences between synthetic poisons, biological, mineral poisons, industrial chemical poisons and their effect on the body.	BD
21	Fundamentals of Ecotoxicology	The discipline is aimed at studying the ecotoxicology of inorganic and organic poisons, the ecotoxicology of chemical warfare agents and radioactive elements. The course analyzes the ecotoxicology of biological and plant poisons, ecotoxicology of atmospheric air, ecotoxicological protection of water bodies, land resources, flora and fauna, ecotoxicological protection from physical environmental pollution.	BD



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22	Fundamentals of Survival in Extreme Conditions	in conditions of autonomous existence in nature and in a locality, solves the issues of human survival in nature and in a locality, in a natural disaster zone, analyzes groups of survival factors, the main provisions of measures in emergency conditions.	BD
23	Equipment and Technology of Atmosphere Protection	This discipline contributes to obtaining knowledge of the composition of atmospheric air, organizational measures for the protection of atmospheric air. Teaches to identify differences in sources of atmospheric air pollution, methods of air purification. The course compares mechanical cleaning and electrical methods of cleaning atmospheric air, catalytic methods of air purification and chemical cleaning of atmospheric air.	BD
24	Basics of Ventilation	Gives an idea of the role and importance of ventilation. The current state of ventilation networks, ways and means of creating favorable conditions in the workplace by means of ventilation, the composition of air pollutants are analyzed. The technologies of industrial ventilation, the structure and features of the ventilation equipment of buildings and structures are compared.	BD
25	Hygienic Certification of Workplaces	The course of the discipline analyzes the certification of hygienic conditions and operating modes of industrial enterprises, measures to prevent occupational injuries and occupational diseases, maintaining sanitary and hygienic conditions at the enterprise. The discipline provides an explanation of the parameters that determine hygienic harmless working conditions, ways to create and maintain them in production conditions.	BD
26	Development of Technical Regulations in Enterprises	The discipline is aimed at developing skills in preparing local regulatory documents, instructions, regulations, production control programs, and documentation for the occupational safety and health management system. The course covers the requirements of the legislation of the Republic of Kazakhstan and international standards in the field of occupational safety and health.	BD
27	The use of Artificial Intelligence in Environmental Protection and Life Safety	This course focuses on the fundamentals of applying artificial intelligence technologies in environmental protection and occupational and life safety. Students learn how intelligent systems can be used for environmental monitoring, risk assessment and prediction, data analysis, and the prevention and management of emergency situations.	BD
28	Rescue and Other Urgent Work	The discipline provides for the organization of rescue and emergency operations carried out in natural and man-made emergencies and emergency response, first aid to victims, response tactics in disaster areas, methods of using special equipment, measures to ensure civil defense and safety.	BD
29	Rescue Equipment and Communication	The discipline forms knowledge of the purpose and principles of functioning of rescue vehicles, classification of warning systems, devices and principles of functioning of radio stations, tactical and technical data of remote control equipment for warning means. The basic rules of technical supervision and safe operation of rescue vehicles and communication equipment are analyzed.	BD
30	Basic Hygienic Classifiers	The discipline is aimed at developing knowledge of the hygienic classification of various industrial sectors, including geological exploration technologies, the oil and gas industry, mining operations, ferrous and non-ferrous metal production processes, as well as the organization of mechanical engineering manufacturing. The course covers industrial classification systems, work and production activity regimes, and the principles for developing measures to prevent occupational injuries and work-related diseases.	BD
31	Technical Regulation of Industrial Safety	The discipline is aimed at developing knowledge of response activities for various types of emergencies at industrial facilities, planning measures for potential emergency situations, organizing and deploying civil defense units and emergency response services, as well as the fundamentals of industrial safety management and regulation. The discipline provides an understanding of the principles of technical regulation and the methods used to ensure the safety of industrial processes.	BD



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32	Equipment and Technology for Cleaning Industrial Emissions	organizational measures for the protection of land, sources of land pollution. Methods of cleaning industrial emissions are evaluated, mechanical cleaning of industrial emissions and thermal methods of cleaning industrial emissions are compared, chemical cleaning facilities of industrial emissions, catalytic methods of cleaning industrial emissions are analyzed.	BD
33	Fire Safety	The discipline is aimed at studying fire safety requirements, methods of fire and explosion prevention, the organization of fire protection at facilities, and personnel actions in the event of a fire. The course covers fire risk assessment, the organization of fire safety briefings, investigation of fire causes, the application of regulatory requirements, and the use of fire protection systems and equipment.	BD
34	Potentially Dangerous Technologies	The discipline is aimed at studying potentially hazardous industrial technologies, methods for identifying workplace hazards, assessing occupational risks, and preventing accidents. The course covers the safe operation of equipment, the organization of production control, the application of modern hazard analysis methods, and the development of measures to reduce risk levels.	BD
35	Comprehensive Safety Assessment of Technological Processes	The discipline is aimed at studying modern methods for the comprehensive assessment of the safety of technological processes. The course covers hazard identification, occupational risk assessment, analysis of workplace factors, selection of preventive measures, implementation of internal control, and decision-making to ensure safe working conditions.	BD
36	Organizational and Regulatory Framework in the Safety of Life	The discipline is aimed at studying the legislative and regulatory legal acts of the Republic of Kazakhstan in the fields of life safety, occupational safety and health, and environmental protection. The course covers the requirements for organizing an occupational safety and health management system, internal control, documentation, state supervision, and the employer's responsibility for ensuring safe working conditions.	BD
37	Life Safety Standards and Labor Protection	The content of the course provides concepts that define the target indicators of environmental quality at production facilities, noise levels, vibration, radioactivity of the magnetic field, thermal and other physical influences, their standards and maximum permissible concentrations. The standards of the state of the environment are considered. The regulatory and legal aspects of ensuring the safety of life and environmental protection at production facilities are applied.	BD
38	Engineering Support of Life Safety	The discipline is aimed at studying engineering methods for ensuring life safety at industrial facilities. The course covers modern engineering solutions for preventing occupational hazards, the selection of technical protective equipment, analysis of the effectiveness of engineering systems, and the application of modern technologies to improve occupational safety.	BD
39	Industrial Sanitation	The discipline is aimed at studying sanitary and hygienic requirements for working conditions, methods for monitoring workplace environmental factors, and the prevention of occupational diseases. The course covers the organization of production control, assessment of working conditions, development of preventive measures, and the application of sanitary standards to ensure employee safety.	PD
40	Fundamentals of Radiation Safety	The discipline introduces students to the characteristics of radiation, radiation safety, accidents, accidents, forecasting methods at radiation facilities, technical methods for reducing the risk of injury at radiation facilities. The analysis of the regulatory framework and the basics of risk management at radiation facilities, the structure and characteristics of radioactive elements, ionizing and non-ionizing radiation, the structure of anti-radiation shelters is given.	PD

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41	Equipment and Technology of Water Purification	significance of techniques and technologies for improving water quality, engineering protection of water resources, sources of water pollution, including in production, the state of water resources is assessed, negative impacts on the water environment are analyzed. Methods and technological schemes of water purification are compared. In this discipline, solutions to problems in the field of water purification are technically and economically justified.	PD
42	Training and First Aid in Emergencies	The discipline is aimed at developing knowledge and practical skills in providing first aid to victims of accidents, injuries, burns, poisoning, and other emergency conditions. The course covers modern first aid algorithms as well as the organization of employee training in first aid skills in accordance with current regulatory requirements.	PD
43	Ecology and Nature Management	Evaluate the general patterns of interaction between living organisms and the environment. Analyze problems related to anthropogenic impact on the environment. Compare the main methods of environmental management, ways of rational use of natural resources. Classify environmental management systems. Compare environmental management systems in economically developed countries and in developing countries.	PD