Graduate Model of this Educational Program
6B11201 - "Life Safety and Environmental Protection"

Upon graduation, the graduate should be able to:
Skills:

- Understand the basic scientific principles of ecosystem functioning and issues related to anthropogenic impacts on the environment.
- Manage risks and understand methods for mitigating the consequences of adverse events while adhering to occupational health and safety standards.
- Complete official documents and maintain records related to performed work.
- Assess hazardous and qualitative properties of technological processes in mineral deposit development, extraction and processing of raw materials, metallurgy and mechanical engineering, chemical and petroleum industries, etc.
- Apply acquired knowledge to practical work and organize operations during emergency situations.
- Develop and implement measures to prevent and mitigate emergencies, perform logistical analysis, and maintain relevant documentation.

Knowledge and Understanding:

- Recognize emergencies occurring in peacetime as a result of natural disasters, industrial accidents, and catastrophes that lead to the destruction of buildings, structures, engineering communications, industrial and energy facilities, as well as loss of life, equipment, and material assets, requiring urgent measures for their elimination, primarily involving rescue and emergency operations.
- Classify the main industrial hazards and risks associated with technological processes, processed materials, and manufactured products.
- Apply technical regulations in professional activities.
- Implement an effective occupational safety management system to reduce the impact of hazardous and harmful production factors on employees.
- Develop a safety declaration for hazardous industrial facilities.
- Conduct experiments to study and sample air, soil, and water in areas contaminated with radioactive substances, calculate shielding against various types of radiation, and analyze radiation conditions at enterprises using radioactive sources.

Competencies:

- Use computer technology in the development of service center projects.
- Control the quality of raw materials and finished products.
- Conduct scientific research and apply methodologies in the field of scientific and academic activities at higher educational institutions.
- Oversee the production cycle of enterprises.
- Design, install, adjust, repair, and operate electrification and automation systems in agriculture.
- Address issues of labor legislation, occupational health and safety regulations, environmental safety, industrial sanitation, and fire protection, as well as the application of legislative and regulatory acts of the Republic of Kazakhstan.

- Apply new energy- and resource-saving technologies in the field of mechanization, electrification of agriculture, and at processing enterprises.