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| Educational program | 6B05201 Ecology |
| EP purpose  | Training of professionally competent specialists of a new formation, in demand on the labor market in the field of ecology, environmental education, upbringing and environmental protection. |
| EP type | Acting  |
| Level on NQF | 6  |
| Level on SQF | 6  |
| The awarded academic degree | bachelor |
| Period of study | 4  |
| Volume of the credits | 240  |
| Language of education | Kazakh, Russian |
| Date of approval of the OP at the Board meeting | 06.04.2022 (protocol No. 10) |
| Professional standard |  Environmental protection |

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| № |  Learning outcomes: |
| 1 | To show an active civic position in interpersonal and intercultural communication in a multilingual environment based on fundamental knowledge and skills in the field of social, political, cultural, psychological sciences in the context of their role in the modernization and digitalization of Kazakh society |
| 2 | To possess the ability to evaluate and apply research methods and innovative approaches in analyzing socially significant phenomena and processes in the legal, economic, industrial, environmental and anti-corruption policy. |
| 3 | Have the ability to communicate orally and in writing in Kazakh/Russian and foreign languages to solve scientific problems of interpersonal and intercultural interaction |
| 4 | Apply knowledge of the general laws of interaction of living organisms with environmental factors, the functioning of ecological systems and the biosphere as a whole; know the ecological characteristics of man as a biological and social being, the history of the evolution of the human-society-nature system and the features of its functioning at various stages of development, political, legal and economic mechanisms for managing the quality of the social and natural environment of man |
| 5 | Be able to assess the quality of natural environments by chemical indicators; predict the behavior of pollutants in the environment, as well as changes in the chemical composition and properties of soils in agricultural landscapes |
| 6 | To ensure the safety of life in the field of professional activity; to put into practice knowledge on environmental standardization and certification |
| 7 | Assess the suitability of land and take measures to reproduce soil fertility; possess methods for diagnosing the condition of reclaimed soils and evaluating the effectiveness of the drainage system; develop a set of measures for the primary development, cultivation and maintenance of reclaimed land |
| 8 | Analyze the current state and location of natural resources on the globe, the territory of the Republic of Kazakhstan; analyze the state of natural resource potential in the world and the Republic of Kazakhstan |
| 9 | To assess the ecological state of the natural environment; to monitor and assess the anthropogenic impact of production on the environment; to monitor compliance with established requirements, applicable norms, rules and standards |
| 10 | To predict, evaluate and eliminate the spread of various types of pollutants in the natural environment; to carry out measures for the disposal, disinfection and disposal of various wastes; to organize the process of recycling and recycling of waste |
| 11 | To conduct interdisciplinary scientific research to solve specific environmental protection tasks to achieve the goals of sustainable development; to formalize and provide the results of scientific research; to use modern methods of scientific research, to process and interpret the data obtained using computer technology |
| 12 | Evaluate the genotoxicity of substances and predict the effects of genotoxic factors on populations of living organisms |