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| **Educational program** | **6В01508 Biology** |
| **EP purpose** | The preparation of highly qualified specialists of biological profile, competitive in the world educational space with in-depth scientific and pedagogical training in the field of teaching biology, demanded by modern educational institutions, able to effectively adapt to the dynamically changing social and professional conditions of activity |
| **EP type** | Acting EP |
| **Level on NQF** | 6  |
| **Level on SQF** | 6  |
| **The awarded academic degree** | Вachelor |
| **Period of study** | 4  |
| **Volume of the credits** | 240  |
| **Language of education** | Kazakh, Russian, English |
| **Date of approval of the OP at the Board meeting** | 06.04.2022 (protocol No. 10) |
| **Professional standard** | Рedagogue |

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| **№** |  **Learning outcomes:** |
| **1** | Shows 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 Kazakhstan's society; |
| **2** | Knows the classification of inorganic and organic compounds, the patterns of chemical reactions; mechanisms of biochemical metabolic processes in plant and animal cells |
| **3** | Explain the laws of heredity, inheritance, and variability, the mechanisms of reproduction and implementation of genetic information, and the systems of replication, transcription, and translation; |
| **4** | Possess the principles of systematics of microorganisms, plants, animals, including terminology in Latin; knowledge of their adaptation to environmental conditions, diversity and basic patterns of distribution; |
| **5** | Use the skills and abilities to distinguish the features of the morphological structure of plants; know the structure and functions of cells, types of tissues, organs, organ systems, features of reproduction and development of living organisms |
| **6** | Interpret knowledge about the physiological processes in the body of plants, animals, and humans, about biometric technologies and biophysical processes in the body, about the types and measures of prevention of phytopathology, about the use of biotechnological and breeding methods to increase the productivity of plants and animals |
| **7** | Apply innovative teaching methods and technologies of teaching biology in the educational process, biological experiment using modern methods of scientific research; apply biological knowledge to solving problems of a qualitative and quantitative nature |
| **8** | Analyze the current positions of the most important evolutionary theories, concepts of natural science, the main ways of speciation and mechanisms of micro-macroevolution; |
| **9** | To predict, plan and manage the educational process in the conditions of the updated content of secondary education, taking into account the physiological and functional features of the development processes, the individual educational needs of pupils and students |
| **10** | 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. |