6V062121 Technologies of artificial intelligence Objectives and learning outcomes of the undergraduate program

|  |  |
| --- | --- |
| Purpose of the EP | Learning outcomes |
| Prepare highly qualified bachelors who are ready for the professional use of artificial intelligence technologies in various sectors of the economy, possessing advanced knowledge and competencies in the field of IT technologies, ensuring the pace and level of scientific, technical and socio-cultural progress and the formation of the intellectual potential of the nation. | **LO1** Communicate freely in the professional environment and society in Kazakh, Russian and English, taking into account the principles of academic writing and the culture of academic honesty.  **LO2** To form public, socio-economic and legal knowledge for use in professional activities; to form intercultural - communicative competence;apply scientific research methods.  **LO3** Apply natural science, mathematical and engineering knowledge in professional activities; choose methods and algorithms for mathematical modeling and data processing.  **LO4** Apply artificial intelligence techniques to develop programs that simulate intelligence.  **LO5** Integrate structured knowledge into computer systems (knowledge bases - as a component of artificial intelligence), use query languages SQL, QBE.  **LO6** Program in environments: С ++ - for resource-intensive technologies and solving problems on devices with minimal performance; Python - in data analysis, machine learning, DevOps and WEB development; Java, PHP - in the development of interactive products for the Internet; iOS, Android, WP, Tisen - when developing mobile applications.  **LO7** Build models of artificial neural networks (ANN) for various data analysis tasks; apply artificial intelligence systems - tools and technologies in the field of automatic natural language processing.  **LO8** Create digital mockups and work with them within the framework of the digital twin platform of production - combining artificial intelligence and machine learning  **LO9** Develop, test, implement and support all types of ICT projects support; practically apply Big Data and Data Mining technologies.  **LO10** To develop skills in working with the components of the organization's IT infrastructure, including system administration and information security.  **LO11** Lead a healthy lifestyle, apply the ability of self-learning and self-education throughout life.  **LO12** To be able to work effectively individually and as a team member, correctly defend one's point of view, correct one's actions and use various methods. |