

## **Objectives and Learning Outcomes of the Programme 6B07160 - Chemical Technology of Inorganic Substances**

**Programme Goal:** Development of competitive bachelors possessing fundamental theoretical and practical knowledge, methods and instruments in the area of chemical engineering.

### **Learning Outcomes:**

**LO1** Possess information and computing skills, ability to generalize, analyze and apprehend the information; fluently communicate in professional environment and the society in Kazakh, Russian and English languages taking into account the principles of academic writing.

**LO2** Use mathematical, social, historical and engineering knowledge and skills, methods of scientific research and elements of economic analysis in professional activities.

**LO3** Demonstrate socio-cultural development based on knowledge of society development laws, formation of ideological, civil, spiritual and social responsibility, culture of academic honesty and decency.

**LO4** Develop new and improve operating technological processes using artificial intelligence and based on the analysis of scientific and technological achievements and a critical assessment of the current state of chemical production.

**LO5** Choose a rational technological scheme of production based on regularities of processing the mineral and technogenic raw materials, calculating mass and heat balances, main and auxiliary equipment.

**LO6** Develop measures to improve production efficiency and safety and solve environmental problems by reducing waste and applying sustainable production methods in the context of the SDGs.

**LO7** Plan and carry out theoretical and experimental research, interpreting the results obtained using methods of mathematical data processing and formulate conclusions.

**LO8** Implement operative control of the production process for obtaining inorganic compounds, analysis of operative information on indicators for technological mode of plant units and control of quality of raw materials and products.

**LO9** Use research, entrepreneurial skills and skills to work in conditions of uncertainty ensuring interconnection of enterprise structural divisions; continuously lifelong improve skills.

**LO10** Work efficiently individually and in a team, persisting correctly in one's opinion, make independent decisions in problem industrial situations showing analytical and critical thinking.