

«Approve»

Director of Mining and Metallurgy
Institute



Rysbekov K.

2022 year.

Protocol No 1 AC MMI

DEVELOPMENT PLAN

«6B07303 – Geospatial digital Engineering» (5B071100 – «Geodesy and Cartography»)

1 General information

The OP «6B07303 – Geospatial Digital Engineering» (5B071100 – «Geodesy and Cartography») was developed in accordance with the National Qualifications Framework, coordinated with the Dublin Descriptors and the European Qualifications Framework, and designed based on a modular system for studying disciplines that form general cultural and professional competencies.

The individuality and uniqueness of the OP «6B07303 – Geospatial digital Engineering» (5B071100 – «Geodesy and Cartography»), consists in the formation of students in the integration of modern digital technologies, such as geographic information systems (GIS), remote sensing of the Earth (remote sensing) and satellite geodesy, to solve problems in the field of cartography, cadastre, monitoring natural resources. The plan is aimed at training specialists who are able to apply modern methods of spatial analysis and digital modeling for the sustainable development of territories and land management.

2 Educational program planning

Planning and management of the educational program of the OP «6B07303 – Geospatial digital Engineering» (5B071100 – «Geodesy and Cartography») is carried out on the basis of priority areas and strategic goals of K.I. Satpayev KazNTU (<https://official.satbayev.university/ru/university/mission-strategy>) and the O.A. Baikonurov Mining and Metallurgical Institute, reflecting the vision, mission, strategic directions and key performance indicators (<https://official.satbayev.university/ru/mining-metallurgy>).

3 The purpose of OP development

The purpose of the educational program is to prepare graduates as competitive specialists in the field of geodesy and cartography, with critical thinking, able to use theoretical and practical information to perform geodetic, topographic, astronomical, geodetic, photogrammetric and cartographic work using modern geodetic equipment and geospatial digital technologies to solve applied problems.

4 Objectives of OP development

1. Preparing graduates for organizational activities that exclude negative phenomena in their professional activities, the development of spiritual values, moral and ethical norms of a person as a member of society, the implementation of the legal and legislative system of the Republic of Kazakhstan with a high level of professional culture, citizenship;

2. Preparing graduates for continuous self-improvement and self-development, mastering new knowledge, skills and abilities in innovative areas of geodesy and cartography;

3. Preparation of graduates with acquired competencies to perform calculations of elements in geodesy and cartography, design technical solutions, participate in the development of technical specifications for topographic, geodetic, aerospace, cartographic work based on a modern educational material and technical base;

4. Graduate training based on the diversity and dynamism of the curriculum's catalog of elective subjects, with a predominance of practical skills in competencies, capable of performing professional functions within one or more types of activities based on the final learning outcomes that take into account the specifics of these types of activities, market requirements for organizational, managerial, and professional competencies;

5. Graduate training as a competitive specialist in the field of geodesy and cartography, including on the basis of increasing the international aspect in educational and scientific programs, competent in the field of advanced technologies of geodesy, cartography, and registration of research results.

5 A long-term action plan for the development and improvement of educational (educational work, educational and methodological work), scientific (research work, scientific and educational work, scientific and methodological work) and organizational and managerial activities for 2023-2026

Event content	Responsible performers
Formation of a working group and a commission to develop an educational program development plan	Director of the Institute, Head of the Department, teaching
Goals and objectives of the educational program development plan	Director of the Institute, Head of the Department, teaching
Study and analysis of the competitive environment, disclosure of the department's capabilities to enhance the image and attractiveness of the educational institution for consumers (students, parents, business	Director of the Institute, Head of the Department, teaching staff
Effective positioning of educational programs implemented by the department based on analytical research of the educational services market	Director of the Institute, Head of the Department, teaching staff

Updating and improving the content of the OP, including the name of the disciplines that define the modern professional competencies of a specialist	Director of the Institute, Head of the Department, teaching staff
Strengthening the material and technical base	Director of the Institute, Head of the Department, teaching
Strengthening career guidance, attracting applicants through tripartite agreements	PC, directorate, Head of the department, teaching staff
Involvement of teaching staff from among business partners in the educational process	Head of the Department, teaching staff
Development and implementation of digital interactive forms of learning, a combination of theoretical and practical methods and forms of	Head of the Department, teaching staff
The introduction of innovative educational technologies into the educational process	Director of the Institute, Head of the Department, teaching
Provision of electronic educational materials, multimedia educational resources in all disciplines of	Director of the Institute, Head of the Department, teaching
Ensuring the participation of teachers and students in interuniversity and international conferences	Director of the Institute, Head of the Department, teaching
Development of scientific schools, training of students	Director of the Institute, Head of the Department, teaching
Regular professional development of teaching staff	Director of the Institute, Head of the Department, teaching
Ensuring safe and comfortable working conditions, training and non-medical activities for students	Directorate, Head of the Department
Development of an action plan with Associations in the field of geodesy and cartography for the purpose of	Central Committee, Directorate, Head of the
Development of corporate culture	Director of the Institute, Head of the Department, teaching

Reviewed at the meeting of the MSaG Department Protocol № 3 dated September «20», 2022.

Head of the Department of MSaG



Orynbasarova E.O.