



Review

to Masters degree programmes 7M07204, 7M07209, 7M07211 - "Metallurgy and mineral processing", developed by the chairs "Metallurgical processes, heat engineering and special materials" and "Metallurgy and mineral processing" of "Kazakh National Research Technical University named after K.I. Satbayev" (2020-2021 recruitment years)

The peer-reviewed degree programmes 7M07204, 7M07209, 7M07211 Metallurgy and Mineral Processing include fundamental, general engineering and vocational training in the field of metallurgy and beneficiation in accordance with the development of science and technology, as well as changing production needs.

The degree programme 7M07204 includes the following stages of training undergraduates: history and philosophy of science, pedagogy of higher education, foreign language (professional), management psychology, theory of metallurgical engineering processes, modern and promising technologies for the processing of raw materials of ferrous and nonferrous metallurgy, special methods of hydrometallurgy, chlorine and vacuum technologies in metallurgy, engineering calculations in metallurgy, technologies and processes of rectification and condensation in metallurgy, modern and promising technologies for the processing of ore and man-made raw materials, technology and refining of radioactive metals, technology and refining of precious metals, innovations in materials science, mass transfer in heterophase metallurgical systems, special chapters of extractive metallurgy (in English), electrolysis of aqueous and non-aqueous media, recycling technologies in ferrous and non-ferrous metallurgy, processes and production of high-purity metals, technologies extracted metals from slags, technology of fractional separation of metals from a vapor-gas mixture.

A distinctive feature of the program is a practice-oriented approach and interdisciplinarity of the structure and content of the educational program. The program also meets modern production demands and critical technologies in the mining and metallurgical sector.

The degree programmes 7M07209 includes the following stages of training undergraduates: foreign language (professional), management psychology, management, modern and promising technologies for processing raw materials of ferrous and nonferrous metallurgy, special methods of hydrometallurgy, technologies for the associated extraction of light, rare and rare earth metals, extraction and sorption into metallurgy of heavy non-ferrous metals, biogeotechnology of metals, processes of direct alloying of steel, special chapters of extractive metallurgy (in English), electrolysis of aqueous and non-aqueous media, calculations of metallurgical processes and equipment, chlorine and vacuum technologies in metallurgy, instrumentation of processes for obtaining radioactive metals, refining in metallurgy of radioactive and noble metals, mass transfer in heterophase metallurgical systems, plasma metallurgy.



A distinctive feature of the program is an individual approach to training in terms of production needs, production requests and the inclusion of disciplines reflecting the critical technologies implemented in production today. The interdisciplinarity of the structure and content of the educational program is respected.

The degree programme 7M07211 includes the following stages of training undergraduates: foreign language (professional), management, management psychology, theory of metallurgical engineering processes, calculations of metallurgical processes and equipment, technologies for the associated extraction of light, rare and rare earth metals, extraction and sorption in metallurgy of heavy non-ferrous metals, special chapters in extractive metallurgy (in English), electrolysis of aqueous and non-aqueous media.

A distinctive feature of the program is the focus of training on basic professional skills using the presented disciplines, production needs and the interdisciplinarity of the structure and content of the educational program are reflected. I note that all 3 educational programs have a discipline in English in the content of the curriculum, which is the fulfillment of the requirement for multilingual education of undergraduates.

The mission of the educational programs 7M07204, 7M07209, 7M07211 - "Metallurgy and mineral processing" is to develop students' social and personal qualities and professional competencies that allow graduates to successfully solve production, technological, organizational and managerial, project tasks in the field of mineral processing and metallurgy, and contributing to their sustainable demand in the labor market, as well as compliance with international education standards; providing enterprises with highly qualified specialists in the field of metallurgy and mineral processing, specializing in the implementation of promising fundamental, innovative, digital and applied research and the development and implementation of modern technological processes that ensure high quality products with minimal costs. Experienced teaching staff and leading practitioners are involved in the implementation of the program.

The peer-reviewed educational program has a high level of provision with educational and methodological documentation and material and technical resources. In general, educational programs 7M07204, 7M07209, 7M07211 - "Metallurgy and mineral processing", developed and implemented by "KazNRTU named after K.I. Satbayev", meet the requirements of the state educational standard and the basic requirements of professional standards, promotes the formation of professional competencies and meet the criteria for educational programs of international accreditation.

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A handwritten signature in blue ink that reads "B. Mishra".