Mining and Metallurgical Institute named after O.A. Baikonurov

Department of Metallurgy and Mineral Processing

EDUCATIONAL PROGRAM

7M07231 Automation and digitalization of metallurgical processes

Code and classification of the field of education:	7M07 Engineering, manufacturing and construction industries
Code and classification of training directions:	7M072 Industrial and manufacturing branches
Group of educational programs:	M117 Metallurgical Engineering
Level based on NQF:	7
Level based on IQF: Study period: Amount of credits:	7 1,5 years 90

Almaty 2025

The educational program 7M07231 Automation and digitalization of metallurgical processes was approved at the meeting of K.I. Satbayev KazNRTU Academic Council

Protocol № 4 dated « 12 » 12 2024.

was reviewed and recommended for approval at the meeting of K.I. Satbayev KazNRTU Educational and Methodological Council

Protocol № 3 dated « 20 » 12 2024.

The Educational program 7M07231 Automation and digitalization of metallurgical processes was developed by Academic committee based on direction of 7M072 Industrial and manufacturing branches

Full name	Academic degree/academic title	Position	Workplace	Signature
Chairperson of Academic Committee:				
Barmenshinova M.B.	c.t.s., associate professor	Head of the Department of MaMP	K.I. Satbayev KazNRTU	
Teaching staff:				
Moldabayeva G.Zh.	c.t.s., associate professor	Professor of the Department of MaMP	K.I. Satbayev KazNRTU	
Ussoltseva G.A.	c.t.s.	Associate professor of the Department of MaMP	K.I. Satbayev KazNRTU	
Employers:				
Ospanov E.A.	d.t.s.	Head of Department of complex processing of technogenic raw materials	«Kazakhmys Corporation» LLP	
Students:				
Sagyndyk A.N.	bachelor of engineering and technology	2nd year master's student	«Kaz Minerals» LLP	

General information

№	Field name	Comments
1	Code and classification of the field of education	7M07 Engineering, manufacturing and construction industries
2	Code and classification of training directions	7M072 Manufacturing and processing industries
3	Educational program group	M117 Metallurgical Engineering
4	Educational program name	7M07231 Automation and digitalization of metallurgical processes
5	Short description of educational program	The educational program 7M07231 Automation and digitalization of metallurgical processes covers industry-specific, priority, fundamental, natural science, general technical and professional training of masters in the field of automation and digitalization of metallurgical processes related to the introduction, operation and modernization of databases as the basis for managing the lifecycle of products used in metallurgical processes. The educational program 7M07231 Automation and digitalization of metallurgical processes is intended for specialized training of undergraduates and was developed within the framework of the direction Manufacturing and processing industries.
6	Purpose of EP	The purpose of the program is to enable master's students to acquire basic scientific foundations for the design, maintenance, and operation of metallurgical process automation systems; study and master modern methodology, technology, and tools related to the implementation, functioning, and modernization of databases as a basis for managing the product life cycle in relation to metallurgical processes; possess basic knowledge of sustainable mineral raw material processing technologies; automate and manage in accordance with the ESG concept and Sustainable Development Goals (SDGs), considering the principles of inclusive education, systematic, ecological, and critical thinking, teamwork, and communication.
7	Type of EP	New
8	The level based on NQF	7
9	The level based on IQF	7
10	Distinctive features of EP	no
11	Education form	Full - time
12	Period of training	1,5 years
13	Amount of credits	90
14	Languages of instruction	Kazakh, russian, english
15	Academic degree awarded	Master of Engineering and Technology
16	Developers and authors	Barmenshinova M., Chepushtanova T.A.