







**ELECTIVE DISCIPLINES** of the educational program for recruitment for the 2022-2023 academic year  
**Educational program 6B07213 - "Mineral processing"**  
**Group of educational programs B071 - "Mining and extraction of minerals"**

Form of study: full-time      Duration of study: 4 years      Academic degree: Bachelor of Engineering and Technology

Year of study	Elective code according to the curriculum	Discipline code	Name of disciplines	Semester	Cycle	Total amount in credits	Total hours	classroom volume of lek/lab/pr	SIS (including TSIS) in hours
<b>Module of basic training</b>									
2	2201	MET516	Magnetic and special enrichment methods	3	B	5	150	1/1/1	105
		MET642	Enrichment of gold-bearing ores and technogenic raw materials					2/0/1	
2	2202	MET512	Hydroacromechanics of processing processes	4	B	5	150	2/1/0	105
		MET643	Coal enrichment					2/1/0	
3	3203	MET521	Processes and devices of processing production	5	B	5	150	2/1/0	105
		MET522	Auxiliary economy in mineral processing					2/0/1	
	3204	AUT427	Automation of production processes at concentrating plants	6	B	5	150	1/1/1	105
		MET517	Flotation reagents in mineral processing					2/1/0	
3205	MET644	Theory and practice of hydrometallurgical processes	6	B	5	150	2/0/1	105	
	MET645	Development of innovative equipment in enrichment					2/0/1		
4	4206	MET646	Technologies for the enrichment of non-ferrous metal ores	7	B	6	180	2/0/2	120
		MET647	Reagent facilities of processing plants					2/0/2	
<b>Module of professional activity</b>									
3	3301	MET531	Enrichment of polymetallic ores	6	P	5	150	1/1/1	105
		MET648	Technologies for processing uranium-containing ores and concentrates					2/1/0	
	3302	MET419	Enrichment of rare metal ores	6	P	4	120	2/1/0	75
		MET574	Ore beneficiation research					2/1/0	
4	4303	MET156	Modeling of concentrating processes	7	P	6	180	1/1/1	120
		MET151	Geotechnological methods of enriching					2/1/1	
	4304	MET536	Enrichment of mining and chemical and non-metallic raw materials	7	P	5	150	2/1/0	105
		MET569	Technology of underground leaching of ores					2/1/0	
	4305	MET570	Magnetic and electrical methods of lightening	8	P	5	150	2/1/0	105
		MET537	Enrichment of ferrous metal ores					1/1/1	
	4306	MET371	Special and combined methods of dressing	8	P	5	150	1/1/1	105
		MET372	Fundamentals of scientific research in ore dressing					2/1/0	
<b>Module of "R&amp;D"</b>									
4	4307	MET564	Design of concentrating factory	8	P	5	150	2/1/0	105
		MET649	Digitalization of mining and processing plants					2/0/1	

The number of credits in elective subjects for the entire period of study	
Cycles of disciplines	Credits
Cycle of basic disciplines (B)	31
Cycle of profile disciplines (P)	35
<b>TOTAL:</b>	<b>66</b>

Decision of the Scientific Council of the Mining and Metallurgical Institute named after O.A. Baikunurov. Protocol № 5 or "26" 12 2022 y.

Head of department "Metallurgy and mineral processing"

Representative of the employers' council of the LLP "KAZ Minerals"

Representative of the employers' council of the JSC "Goldstone Minerals"

Representative of the employers' council of the Weizmann Research Institute

M.B. Barmenshinova

U.K. Jetybaeva

A.K. Arinov

V.A. Kaplan