



MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN
KAZAKH NATIONAL RESEARCH TECHNICAL UNIVERSITY NAMED AFTER K.I. SATPAYEV

APPROVED
Rector of KazNRTU named after K.I. Satpayev
M.M. Begentayev
"___" _____ 2021 y.

MAJOR CURRICULUM for 2021-2022 academic year admission
Educational program 6B07203 - "Metallurgy and mineral processing"
Group of Educational programs 8071 - "Mining and extraction of minerals"

Full-time study Study duration : 4 years Academic degree: bachelor of engineering and technology

Year of study	Code	Name of discipline	Cycle	Total Credits	Total hours	classroom volume of lecture/pr	LMS (including IMS), in hours	Code	prerequisites	Code	Name of discipline	Cycle	Total Credits	Total hours	classroom volume of lecture/pr	LMS (including IMS), in hours	Code	prerequisites		
																			1 semester (fall 2021)	
1	LNG108	English	G	5	150	0/0/3	105		Diagnostic test	LNG108	English	G	5	150	0/0/3	105				
	LNG104	Kazakh (Russian) language	G	5	150	0/0/3	105		Diagnostic test	LNG104	Kazakh (Russian) language	G	5	150	0/0/3	105				
	HUM100	Contemporary History of Kazakhstan (state exam)	G	5	150	1/0/2	105		no	MET499	Basics of mineral processing	B	5	150	2/1/0	105		no		
	PHY111	Physics I	B	5	150	1/1/1	105		no	PHY467	Engineering thermodynamics	B	5	150	1/0/2	105				
	MAT101	Mathematics I	B	5	150	1/0/2	105		no	MAT102	Mathematics II	B	5	150	1/0/2	105			MAT101	
	GEN177	Engineering and Computer Graphics	B	5	150	1/1/1	105		no	HUM129	Culturology	G	2	60	1/0/0	45		no		
	HUM128	Political science	G	2	60	1/0/0	45		no	CHE495	Chemistry	B	5	150	1/1/1	105		no		
	MET501	Technological mineralogy	S	5	150	2/1/0	105		no	HEX102	Physical education II	G	2	60	0/0/2	30			KFK103	
	KFK101	Physical education I	G	2	60	0/0/2	30		no											
		Total:			39		24							34		21				
2	CSE677	Information and communication technology (eng)	G	5	150	3/1/0	105		no	HUM132	Philosophy	F	5	150	1/0/2	105		no		
	MAT103	Mathematics III	B	5	150	1/0/2	105		no	HUM122	Psychology	G	2	60	1/0/1	45		no		
	HUM127	Sociology	G	2	60	1/0/0	45		no	MNG487	Fundamentals of Entrepreneurship, leadership and anti-corruption culture	G	3	90	1/0/1	60		no		
	CHE127	Physical chemistry	B	5	150	2/1/0	105		CHE495	MET502	Processes of ore preparation and equipment	B	5	150	2/1/0	105		MET499		
	MET500	General Metallurgy	S	5	150	2/0/1	105		MET499	MET506	Theory of metallurgical processes II	B	5	150	2/1/0	105		MET619		
	MET619	Theory of metallurgical processes I	B	5	150	2/1/0	105		MET501	MET503	Metallurgy of heavy non-ferrous metals	B	5	150	2/1/0	105		CHE127		
	KFK103	Physical education III	G	2	60	0/0/2	30		KFK102	MET505	Gravitational methods of enrichment	B	5	150	2/1/0	105		MET499		
		Total:			29		18							32		20				
	3	MET507	Flotation methods of dressing	B	5	150	2/1/0	105		MET502	MET622	Heat power engineering of metallurgical processes	B	5	150	2/0/1	105		MET619	
		MET509	Metallurgy of ferrous metals	B	5	150	2/0/1	105		MET619	MET621	Metallurgical Engineering (in English)	B	5	150	2/0/1	105		CHE127	
MET620		Metallurgical heat engineering	B	5	150	2/1/0	105		MET619	MET508	Metallurgy of secondary raw materials	B	5	150	2/1/0	105		MET619		
MET504		Metallurgy of light metals	B	5	150	2/1/0	105		CHE500	MET530	Metallurgy of precious metals	B	5	150	2/0/1	105		CHE127		
3302		Elective	S	5	150	1/0/2*	105			3304	Elective	S	5	150	1/0/2*	105				
3303		Elective	S	5	150	1/0/2*	105			3305	Elective	S	5	150	1/0/2*	105				
		Total:			30		18							35		21				
4		CHE452	Ecology and Sustainable Development	G	2	60	1/0/0	45			4309	Elective	S	5	150	1/0/2*	105			
		CHE451	Life safety	G	2	60	1/0/0	45		no	4310	Elective	S	5	150	1/0/2*	105			
		4307	Elective	S	5	150	1/0/2*	105			ECA001	*Preparation & writing of thesis (project)	FA	6						
	4308	Elective	S	5	150	1/0/2*	105			ECA103	Thesis (project) defence*	FA	6							
		Total:			14		8							22		6				

Year of study	Code	Name of discipline	Cycle	Credits	Recommended semester	Total number of credits		
						compulsory	elective	total
Mandatory types of training with an assessment of P/NP								
1	AAP101	Educational internship (I)	B	2	2			
2	AAP109	Industrial internship (I)	S	2	4			
3-4	AAP114	Industrial internship II (S)	S	3	6			
Additional types of training								
1	AAP107	Sports club sectional	G	0	5			
2-3	AAP500	Military training	G	0	5			
Total:						178	52	230
Final attestation (FA)						12	0	12
Total:						190	52	242

* Notes: The shuffling of disciplines is at the discretion of the department. No more than the specified contact hours

Decision of the Academic Council KazNRTU named after K.I. Satpayev. Minutes # __, dated " __ " _____ 2021.

Decision of the Academic Council of the MaMI named after O. A. Baikonurov. Minutes # __, dated " __ " _____ 2021.

Vice-Rector for Academic Affairs

Director of the Mining and Metallurgical Institute named after O. A. Baikonurov

Head of department "Metallurgy and mineral processing"

Head of department "Metallurgical processes, heat engineering and technology of special materials"

Partner university:

Worcester Polytechnic Institute (USA)

Representative of Specialty council of the LLP "Kazakhmys"

Representative of Specialty council of the LLP "KAZ Minerals"

B.A. Zhautikov

K.B. Rysbekov

M.B. Barmenshinova

T.A. Chepushtanova

B. Mishra

E.A. Ospanov

U.K. Jetybaeva