

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



Affirm
 Rector of the NPJSC "KazNRTU" named K.I. Satbayev"
 K. Beisembetov
 " 12 " 08 2019 г.

CURRICULUM
 Educational program - "Mining Engineering"
 set of 2019 - 2020 academic year

Academic degree: Master of Technical Sciences (scientific and pedagogical direction)
 Duration of study: 2 years

Year of study	Code	Name of the discipline	Component	Total volume of credits		Form of control	Prerequisites	Code	Name of the discipline	Component	Total volume of credits		Form of control	Prerequisites
				ECTS	PK						ECTS	PK		
Term 1				Term 2										
1	LNG205	Foreign language (professional)	BD UC	5	3	0/0/3		MIN259	Continuous Career Design Methodology	BD CC	5	3	2/0/1	Ex.
	MIN268	Digital technology in mining SMART Mine	PD UC	5	3	1/0/2		MIN279	Methodology of mining science and research methods					Ex.
	MIN281	The development of the construction of shafts	PD CC	4	2	1/0/1		MIN260	Geotechnological processes in the development of mineral deposits	BD CC	5	3	2/0/1	Ex.
	MIN282	Mounting fastenings in the construction of underground structures					MIN280	Process regulations and mining planning	Ex.					
	MIN283	Subsoil Code and rights regimes in subsoil use	PD CC	4	2	1/0/1		HUM201	History of philosophy and science	BD UC	4	2	1/0/1	Ex.
	MIN284	Resource Saving Integrated Mineral Resources					HUM207	Pedagogy of Higher education	BD UC					4
	MIN250	Innovative methods of drilling and blasting operations	BD CC	5	3	2/0/1		HUM204	Psychology of management	BD UC	4	2	1/0/1	Ex.
	MIN278	Technology of integrated development of underground space					AAP226	Master's research work	MRW					7
			Mathematical modeling of engineering problems (Python MatLab)	PD UC	5	3	1/0/2							
	AAP225	Teaching practice	BD UC	3	3		Report							
Total:				31	19			Total:				29	14	
Term 3				Term 4										
2	MIN253	Metro Underground Construction Technology	PD CC	5	3	2/0/1		AAP234	Master's research work	MRW	9	2		
	MIN285	Modernization of the processes of horizontal and inclined mine workings					AAP314	Research practice	PD	9	2			
	MIN273	Design of underground mines	PD CC	5	3	2/0/1		ECA203	Registration and protection of the master's thesis	FA	12	3		
	MIN211	Methodology for the construction of underground structures												
	MIN287	Intensification of reclamation of lands disturbed by open-pit mining	PD CC	4	2	1/0/1								
	MIN286	Highly safe mining operations in deep quarries												
	MIN289	Mining management	PD CC	4	2	1/0/1								
	MIN290	Technology of laying-of the developed space												
	MIN291	Rational technologies for development of placer deposits	PD CC	4	2	1/0/1								
MIN288	Mining Production Analytics													
	AAP227	Scientific research work of master	SRWM	8	2		Report							
Total:				30	14			Total:				30	7	
Total:								Total:				120	54	

The decision of the Academic Council of the Satbayev University. Protocol № 1 от " 12 " 08 2019 y.

The decision of the Scientific Council MMI. Protocol № 8 от " 31 " 05 2019 y.

Vice-Rector for Research and Academic Affairs

 D.K. Nauryzbaeva

Director of the School of geology, petroleum and mining engineering  A.Syzykov

Head of the Department "Mining engineering"

 K.B. Rysbekov