

MODULAR EDUCATIONAL PROGRAM for recruitment to 2019-2020 academic year

Educational program 6B07205 - "Mining engineering"

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	Discipline code	Name of disciplines	semester	Cycle	Credits	Total hours	classroom volume of lek/lab/pr	SKS (including SRSP) in hours	Form of control	Competencies
Language Training module										
Required component										
1	LNG1051	Beginner (A1)	1	G	4	120	0/0/3	75	E	Diagnostician. test
	LNG1052	Elementary English (A1)								
	LNG1053	General English 1 (A2)								
	LNG1054	General English 2 (A2)								
	LNG1055	Academic English (B1)								
LNG1056	Business English (B2)									
1	LNG1012	Kazakh (Russian) language (A2)	1	G	4	120	0/0/3	75	E	Diagnostician. test
	LNG1012.1	Academic Kazakh (Russian) language (B 1)								
	LNG1012.2	Business Kazakh (Russian) language (B 1)								
1	LNG1052	Elementary English (A1)	2	G	4	120	0/0/3	75	E	LNG1051
	LNG1053	General English 1 (A2)								LNG1052
	LNG1054	General English 2 (A2)								LNG1053
	LNG1055	Academic English (B1)								LNG1054
	LNG1056	Business English (B2)								LNG1055
	LNG1057	Professional English (B2+)								LNG1056
1	LNG1012	Academic Kazakh (Russian) language (B1)	2	G	4	120	0/0/3	75	E	LNG1012.1
	LNG1012.1	Business Kazakh (Russian) language (B1)								LNG1012.1
	LNG103	Culture of business communication (C1)								LNG1012.2
2	LNG1053	General English 1 (A2)	3	G	4	120	0/0/3	75	E	LNG1052
	LNG1054	General English 2 (A2)								LNG1053
	LNG1055	Academic English (B1)								LNG1054
	LNG1056	Business English (B2)								LNG1055
	LNG1057	Professional English (B2+)								LNG1056
2	LNG1054	General English 2 (A2)	4	G	4	120	0/0/3	75	E	LNG1053
	LNG1055	Academic English (B1)								LNG1054
	LNG1056	Business English (B2)								LNG1055
	LNG1057	Professional English (B2+)								LNG1056
	LNG109	IELST Preparation								LNG1057
	LNG110	Intercultural Communication								LNG1056
	LNG117	Technical Writing								
	LNG118	Public speaking								
	LNG119	Productivity skills								
	LNG120	GRE preparation								
LNG121	Academic Writing									
Module of social disciplines										
Required component										
1	KFK101	Physical Culture I	1	G	2	60	0/0/2	30	E	no
1	KFK102	Physical Culture II	2	G	2	60	0/0/2	30	E	no
1	HUM100	Modern History of Kazakhstan (state exam)	1	G	5	150	1/0/2	105	E	no
2	HUM132	Philosophy	4	G	5	150	1/0/2	105	E	no
Socio-political knowledge module										
Required component										
3	HUM126	Social-political knowledge	5	G	8	240	4/0/0	180	E	no
Module of physical and mathematical training, computer science and chemistry										
University component										
1	MAT001	Mathematics	1	B	5	150	0/0/3	105	E	Diagnostician. test
1	MAT101	Mathematics I					1/0/2			
1	PHY110	Heat treatment of materials	1	B	5	150	0/1/2	105	E	Diagnostician. test
1	PHY111	Physics I					1/1/1			
1	MAT101	Mathematics I					1/0/2			
1	MAT102	Mathematics II	2	B	5	150	1/0/2	105	E	MAT001
1	PHY111	Physics I	2	B	5	150	1/1/1	105	E	PHY110
1	PHY112	Physics II								PHY111
2	MAT102	Mathematics II	3	B	5	150	1/0/2	105	E	MAT101
2	MAT103	Mathematics III								MAT102
2	PHY112	Physics II	3	B	5	150	1/1/1	105	E	PHY111
2	GEN146	Theoretical and applied mechanics					2/1/0			PHY112
2	CSE174	Information and communication technologies	3	G	5	150	2/1/0	105	E	no

2	MAT103	Mathematics III	4	B	5	150	1/0/2	105	E	MAT102
2	MAT126	Ordinary differential equations. Matlab.								MAT103
2	CHE192	General chemistry	4	B	5	150	2/1/0	105	E	no
Professional activity module										
University component										
1	MAP160	Geodesy	1	B	5	150	1/2/0	105	E	no
1	MIN101	Bases of mining (Introduction to specialty)	2	P	5	150	1/0/2	105	E	no
1	GEO117	Fundamentals of Geology	2	B	5	150	2/0/1	105	E	no
2	MIN180	Physics of rock mass	3	B	5	150	1/2/0	105	E	MIN101
2	MIN146	Shattering process	3	B	5	150	1/1/1	105	E	MIN101
2	MIN166	Construction of mining enterprises	4	B	5	150	1/1/1	105	E	MIN101
3	MIN505	Borehole production of uranium								MIN101
3	MAP532	Mathematical processing of mine surveying and geodetic measurements	5	B	5	150	1/0/2	105	E	MIN101
3	MIN453	Open-cast mining technology	5	B	5	150	1/0/2	105	E	MIN101
3	MIN458	Technology of underground mining operations	6	B	5	150	1/0/2	105	E	MIN101
3	MET179	Processing and enrichment of minerals	6	P	5	150	2/1/0	105	E	MIN101
3	MIN444	Datamine Workbook	6	B	5	150	1/0/2	105	E	MIN101
4	MIN481	Aerology of concessions	7	P	5	150	2/1/0	105	E	MIN101
Component of choice										
2	MIN142	Processes of open cast mining					1/0/2			MIN101
2	MIN106	Deposit opening and development when underground mining					2/0/1			MIN101
2	MIN107		Deposit opening and development when uranium underground borehole	4	B	5	150	2/0/1	105	E
2	MIN141	Industrial explosives					1/1/1			MIN101
2	MIN128	Mechanics of underground structures					2/0/1			MIN180
2	MAP138	General course of surveying					1/2/0			MAP160
3	MIN460	Interconnection and planning of open cast mining processes					2/0/1			MIN101
3	MIN454	Underground mining operations processes					2/0/1			MIN101
3	MIN461	Uranium deposits underground mining geotechnology	5	B	5	150	2/0/1	105	E	MIN101
3	MIN462	Underground construction facilities					2/0/1			MIN101
3	MAP529	Mine surveying drawing					0/0/3			MAP160
3	TEC186	Opening mine mining and transport equipment								MIN101
3	PED147	Mining-and-transport equipment of underground mines	5	B	5	150	2/0/1	105	E	MIN101
3	MIN455	Shield tunneling complexes								MIN101
3	MIN463	Special methods of conducting open cast mining operations					2/0/1			MIN101
3	MIN464	Design and computer style for mining operations development plans					1/0/2			MIN101
3	MIN465	Mining drawing when uranium deposits underground mining	5	P	5	150	1/0/2	105	E	MIN101
3	MIN456	Technology of construction of tunnels					2/0/1			MIN101
3	MIN457	Ways to support underground structures					2/0/1			MIN101
3	MAP520	Surveying - geodesy instruments					1/0/2			MAP160
3	MIN466	Resource-saving and low-waste technology on ore mines					2/0/1			MIN101
3	MIN467	Mineral deposits underground mining systems					2/0/1			MIN101
3	MIN468	Solutions hydraulics when uranium development	6	B	5	150	2/0/1	105	E	MIN101
3	MIN469	Technology of construction of vertical mine workings					2/0/1			MIN101
3	MAP531	Surveying support of mining operations in the construction of mining enterprises					1/0/2			MAP172
3	MIN470	Technological complexes of open cast mining operations					2/0/1			MIN101
3	MIN483	Rock conditions management					2/0/1			MIN101
3	MIN471	Geotechnological wells drilling and operation	6	P	5	150	2/0/1	105	E	MIN101
3	MIN472	Calculation of the design of underground structures					2/0/1			MIN101
3	MAP528	GIS cartography in mining					1/0/2			MAP160
3	MIN473	Open development of building materials					1/0/2			MIN101
3	MIN474	Technology and complex mechanization of underground mining					2/0/1			MIN101
3	MIN475	Equipment of geotechnological fields at uranium dillhole in situ leaching	6	P	5	150	2/0/1	105	E	MIN101
3	MIN476	Design of construction of mining facilities					2/0/1			MIN101
3	MAP522	Mine surveying for the construction of mines					1/0/2			MAP160
3	MIN482	Conducting mine workings at quarries					1/0/2			MIN101
3	MIN131	Underground mines air supply					2/0/1			MIN101
3	MIN484	Fields development in special conditions	6	P	5	150	2/0/1	105	E	MIN101
3	MIN485	Special drilling and blasting operations					2/0/1			MIN101
3	MIN486	Construction of underground hydraulic structures					2/0/1			MAP160
3	MAP521	Mining surveying at open-pit mining					1/0/2			MIN101
4	MIN487	Prospective and current planning of open cast mining operations					2/0/1			MIN101
4	MIN488	Product quality management					2/0/1			MIN101
4	MIN489	Technology and mechanization of piling works					2/0/1			MIN101
4	MIN490	Separate methodes of uranium deposits development	7	P	5	150	2/0/1	105	E	MIN101
4	MIN491	Designing of blasting operations					2/0/1			MAP138

4	MIN492	Designing of construction of underground mining enterprises					2/0/1		MIN407
4	MAP525	Mine Survey of underground development systems					1/0/2		MIN101
4	MIN493	Reclamation of disturbed lands on mines					2/0/1		MIN101
4	MIN494	Layout of underground mines plan					2/0/1		MIN101
4	MIN498	Uranium deposits conservation	7	P	5	150	2/0/1	105	E
4	MIN495	Technology of construction of horizontal and inclined mine workings					2/0/1		MIN101
4	MAP523	Geometry of subsoil					1/0/2		MAP160
4	MIN477	Opening of career fields					1/0/2		MIN407
4	MIN478	Subsoil use contract and license					2/0/1		MIN101
4	MIN479	Geotechnological methods of development of solid minerals	7	B	5	150	2/0/1	105	E
4	MIN480	Special ways of building underground structures					2/0/1		MIN101
4	MAP524	Geomechanics					1/0/2		MAP160
4	MIN496	Design of ore and coal mines					1/0/2		MIN101
4	MIN497	Mines conservation					2/0/1		MIN101
4	MIN501	Layout of underground deposits plan	8	P	5	150	2/0/1	105	E
4	MIN499	Reconstruction of mines and underground structures					2/0/1		MIN101
4	MAP527	Mine survey software					1/0/2		MAP160
4	MIN500	Systems of open development of mineral deposits					1/0/2		MIN101
4	MIN441	Sheet deposits underground mining					2/0/1		MIN101
4	MIN432	Underground development of indigenous and alluvial deposits	8	P	5	150	2/0/1	105	E
4	MIN433	Technology of construction of urban underground structures					2/0/1		MIN101
4	MAP526	Mine surveying of the construction of tunnels					1/0/2		MAP206

Practice-oriented module

Required component

AAP101	Educational practice	2	B	2					
AAP109	Production practice I	4	B	4					
AAP103	Production practice II	6	P	8					

Module of final certification

Required component

ECA003	Preparation and writing of a thesis (project)*	8	FC	6					
ECA103	Defense of the thesis (project)*	8	FC	6					

Module of additional types of training

Component of choice

AAP107	Sports club sectional	5-7		0					
AAP500	Military affairs	3-6		0					

Number of credits for the entire period of study

Cycles of disciplines	Credits		
	mandatory	elective	Total
Cycle of general education disciplines	55		55
Cycle of basic disciplines	91	25	116
Cycle of profile disciplines	23	40	63
Total for theoretical training:	169	65	234
Final certification	12	0	12
total:	181	65	246

The decision of the Academic Council of Kazntu named after K.Satpayev. Protocol № 3 "25" 06 2021 r.

Decision of the Academic Council of the Institute . Protocol № 5 "24" 12 2021 r.

Vice-Rector for Academic Affairs

B.A. Zhautikov

Director of the Institute

K.B.Rysbekov

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Representative of the Specialty Council from employers

N.S.Buktukov