



MAJOR ELECTIVE DISCIPLINES for 2020-2021 academic year admission  
Educational program 6B07205 - "Mining engineering"  
Academic degree: bachelor of engineering and technology

Full-time study

Study duration : 4 years

Academic degree: bachelor of engineering and technology

year of study	Code of elective	Code of discipline	Name of discipline	Cycle	Credits	total times	lecture/ laboratory/ practice	SIS (including STIS), in hours	Prerequisites	
1	1106	LNG103	Culture of business communication	O	4	120	0/0/2	75	DK(R)Ya 1102.2	
		LNG102	Rhetoric							
		<b>In total:</b>								
2	2215	<b>4 semester</b>		B	5	150	105			
		MIN449	Open-pit mining processes							1/0/2
		MIN450	Deposit opening and devoloment when underground mining							2/0/1
		MIN451	Deposit opening and development when uranium underground borehole							2/0/1
		MIN452	Industrial explosives							1/1/1
		MIN459	Mechanics of underground structures							2/0/1
	MAP530	General course of surveying	1/0/2							
	<b>In total:</b>			5		6				
	3	3217	<b>5 semester</b>		B	5	150	105		
			MIN460	Interconnection and planning of open cast mining processes						
MIN454			Underground mining operations processes	2/0/1						
MIN461			Uranium deposits underground mining geotechnology	2/0/1						
MIN462			Underground construction facilities	2/0/1						
MAP529		Mine surveying drawing	0/0/3							
3218		TEC186	Opencast mine mining -and -transport equipment	2/0/1						
		PED147	Mining-and-transport equipment of underground mines	2/0/1						
		MIN455	Shield tunneling complexes	2/0/1						
		MAP531	Surveying support of mining operations during the construction of mining enterprises	1/0/2						
3302		MIN463	Special methods of conducting open cast mining operations	2/0/1						
		MIN464	Design and computer style for mining operations development plans	1/0/2						
		MIN465	Mining drawing when uranium deposits underground mining	1/0/2						
		MIN456	Technology of construction of tunnels	2/0/1						
		MIN457	Ways to support underground structures	2/0/1						
MAP520		Surveying-geodesy instruments	1/0/2							
3219		MIN477	Opening of career fields	1/0/2						
		MIN478	Opening of career fields	2/0/1						
		MIN479	Geotechnological methods of development of solid minerals	2/0/1						
		MIN480	Special ways of building underground structures	2/0/1						
	MAP532	Mathematical processing of surveying and geodetic measurements	1/0/2							
<b>In total:</b>			20		12					
4	3221	<b>6 semester</b>		B	5	150	105			
		MIN466	Resource-saving and low-waste technology on ore mines							2/0/1
		MIN467	Mineral deposits underground mining systems							2/0/1
		MIN468	Solutions hydraulics when uranium development							2/0/1
		MIN469	Technology of construction of vertical mine workings							2/0/1
	MAP522	Mine surveying for the construction of mines	1/0/2							
	3305	MIN470	Technological complexes of open cast mining operations	2/0/1						
		MIN131	Underground mines air supply	2/0/1						
		MIN471	Geotechnological wells drilling and operation	2/0/1						
		MIN472	Calculation of the design of underground structures	2/0/1						
	MAP528	GIS cartography in mining	1/0/2							
	3306	MIN473	Open development of building materials	1/0/2						
		MIN474	Technology and complex mechanization of underground mining	2/0/1						
		MIN475	Equipment of geotechnological fields at uranium dillhole in situ leaching	2/0/1						
		MIN476	Design of construction of mining facilities	2/0/1						
MAP521		Mine surveying at open pit mining	1/0/2/2							
<b>In total:</b>			15		9					
5	4308	<b>7 semester</b>		P	5	150	105			
		MIN482	Conducting mine workings at quarries							1/0/2
		MIN483	Rock conditions management							2/0/1
		MIN484	Fields development in special conditions							2/0/1
		MIN485	Special drilling and blasting operations							2/0/1
	MIN486	Construction of underground hydraulic structures	2/0/1							
	MAP524	Geomechanics	1/0/2							
	4309	MIN487	Prospective and current planning of open cast mining operations	2/0/1						
		MIN488	Product guality management	2/0/1						
		MIN489	Technology and mechanization of piling works	2/0/1						
		MIN490	Separate methodes of uranium deposits development	2/0/1						
		MIN491	Designing of blasting operations	2/0/1						
	MIN492	Designing of construction of underground mining enterprises	2/0/1							
MAP525	Mine Survey of underground development systems	1/0/2								
4310	MIN493	Reclamation of disturbed lands on mines	2/0/1							
	MIN 494	Layout of underground mines plan	2/0/1							
	MIN498	Uranium deposits conservation	2/0/1							
	MIN495	Technology of construction of horizontal and inclined mine workings	2/0/1							
	MAP523	Geometry of subsoil	1/0/2							
<b>In total:</b>			15		9					
5	4311	<b>8 semester</b>		P	5	150	105			
		MIN496	Design of ore and coal mines							1/0/2
		MIN497	Mines conservation							2/0/1
		MIN501	Layout of underground deposits plan							2/0/1
	MIN499	Reconstruction of mines and underground structures	2/0/1							
	MAP527	Mine survey software	1/0/2							
	4312	MIN500	Systems of open development of mineral deposits	1/0/2						
MIN441		Sheet deposits underground mining	2/0/1							
MIN432		Underground development of indigenous and alluvial deposits	2/0/1							
MIN433	Technology of construction of urban underground structures	2/0/1								
MAP526	Mine surveying of the construction of tunnels	1/0/2								

In total:	10	6
Credits numbers of elective disciplines over the entire period of study		
Cycles of disciplines	Credits	
Cycle of general disciplines (G)	4	
Cycle of basic disciplines (B)	25	
Cycle of special disciplines (S)	40	
Total:	69	

Decision of the Academic Council of the School of Industrial Engineering, Minutes № 5, dated "28" 12 2020.

Head of the Department "Mining"

Representative of the Specialty Council from employers

S.K.Moldabayev

N.S. Buktukov