

MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN
SATBAYEV UNIVERSITY



MAJOR ELECTIVE DISCIPLINES for 2018-2019 academic year admission
5B072400 – "Technological machines and equipment (by industry)"

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	lec/lab/pr	Prerequisites
1	2nd semester						
	1101	CBC 1104.2.1	Culture of business communication (C1)	G	2	0/0/2	BK(R) 1102.2
		Rhe 1104.2.2	Rhetoric (C1)				
Total:					2		
2	3rd semester						
	2102	LNG109	IELTS Preparation	G	3	0/0/3	LNG 1056
		LNG110	Intercultural Communication				
		LNG117	Technical Writing				
		LNG118	Public speaking				
		LNG119	Productivity skills				
		LNG120	GRE preparation				
	2212	LNG121	Academic Writing	B	3	2/0/1	no no no
		TEC168	Training on adaptation to mining				
		PED427	Training on adaptation to metallurgical production				
PED418		Training on adaptation to oil and gas production					
Total:					3		
2	4 семестр						
	2103	LNG109	IELTS Preparation	G	3	0/0/3	LNG 1056
		LNG110	Intercultural Communication				
		LNG117	Technical Writing				
		LNG118	Public speaking				
		LNG119	Productivity skills				
		LNG120	GRE preparation				
	2214	GEN104	Strength of materials	B	3	1/1/1	PHY112
		GEN146	Technical mechanics				
	2216	TEC119	Heat engineering and heat engineering installations in mining machines and stationary installations	B	3	2/0/1	PHY112
		TEC113	Metallurgical furnaces and heating devices				
		PED128	Heat engineering and heat engineering installations				
		TEC197	Thermodynamics, heat transfer and heat engineering equipment				
	2217	TEC116	Designing and CAD of technological machines and equipment	B	3	1/0/2	GEN125
		TEC118	Calculation and design of technological machines and equipment				
	Total:					15	
3	5nd semester						
	3220	TEC148	Fuels, oils and special liquids	B	3	2/0/1	CHE192
		PED414	Friction and wear			2/0/1	PHY112
		TEC107	Reliability of the machines			1/0/2	MAT103
	3221	TEC152	Control and measuring equipment	B	3	2/0/1	PHY112
		TEC150	Measuring tool			2/0/1	PHY112
		TEC153	Tool base of metallurgical enterprises			2/0/1	TEC193
		TEC154	Standardization in metallurgical engineering			2/0/1	TEC193
		TEC155	Technological processes in the oil and gas industry			2/0/1	TEC193
		TEC156	Technology of drilling wells and oil and gas production			2/0/1	TEC193
	3222	TEC157	Technology of oil and gas engineering	B	3	2/0/1	TEC193
		TEC105	Mining machinery and equipment			2/0/1	PHY112
		TEC158	Mining machinery			2/0/1	PHY112
		TEC159	Basis strength of metallurgical machines			2/0/1	TEC193
		TEC161	Dynamics of metallurgical machines			2/0/1	TEC193
	3301	PED415	Hydraulics and hydraulic drive of technological machines	B	3	2/0/1	PHY112
		TEC160	Hydromechanics of liquids and gases			2/0/1	PHY112
		TEC121	Transportation machines			2/0/1	PHY112
		TEC162	Logistics in transport			2/0/1	PHY112
		PED430	Technique of field experiment			2/0/1	TEC193
		PED426	Organization and planning of research work			2/0/1	MAT103
	3302	TEC151	Training workshops	S	3	2/0/1	PHY112
		PED101	Basics of plumbing			2/0/1	PHY112
		MIN414	Development of mineral deposits			2/0/1	PHY112
		MIN173	Mining technology			2/0/1	PHY112
		TEC112	Equipment for ore preparation			2/0/1	TEC193
		TEC137	Mechanical equipment of metallurgical plants. Part 1			2/0/1	TEC193
TEC104		Drilling machines and complexes	2/0/1			TEC193	
TEC130	Machines and equipment for drilling oil and gas wells on land	2/0/1	TEC193				
TEC131	Machines and equipment for drilling oil and gas wells at sea	2/0/1	TEC193				
Total:					15		

		6nd semester						
3	3223	TEC108	Pumps, fans, compressors	8	3	2/0/1	PHY112	
		TEC191	Drives of technological machines			2/0/1	PHY112	
	3305	3	MIN406	Open-cast mining	5	3	2/0/1	PHY112
			MIN407	Open-cast mining technology			2/0/1	PHY112
			TEC146	Technology and equipment welding production			2/1/0	PHY112
			PED425	Processes and equipment for welding production			2/1/0	PHY112
			TEC109	Oil and gas field machines and mechanisms			2/0/1	TEC104
			TEC134	Machines and equipment for oil and gas production on land			2/0/1	TEC130
			TEC133	Machines and equipment for oil and gas production at sea			2/0/1	TEC131
	3306	3	TEC170	Hydropneumatic drive of mining machines and fixed installations	5	3	2/0/1	GEN146
			TEC169	Drives of mining machines and fixed installations			2/0/1	GEN146
			TEC141	The equipment of metallurgical shops			2/0/1	TEC112
			TEC138	Mechanical equipment of metallurgical plants. Part 2			2/0/1	TEC137
			PED190	Internal combustion engines			2/0/1	TEC197
			PED191	Gas-pumping units			2/0/1	TEC197
			PED192	Gas turbine plants			2/0/1	TEC197
	Total:					9		
			7nd semester					
	4	4307	3	TEC195	5	3	2/0/1	PHY112
TEC177				Drain, fan and pneumatic installations			2/0/1	PHY112
PED424				Gas-cleaning and dust-collecting equipment of metallurgical shops			2/0/1	TEC112
PED423				Equipment for flue gas removal and cooling of metallurgical units			2/0/1	SAF104
PED157				Well overhaul equipment and installations			2/0/1	TEC109
PED158				Technique and technology of overhaul of wells on land			2/0/1	TEC134
4308		3	PED159	Techhique and technology of workover of wells on the shelf	5	3	2/0/1	TEC133
			MIN416	Burro-blasting works			2/0/1	PHY112
			MIN415	Technology of mine workings			2/0/1	PHY112
			PED184	Basics of maintenance of metallurgical equipment			2/0/1	TEC180
			PED185	Technical diagnostics of metallurgical equipment			2/0/1	TEC180
			TEC127	Hydromachines and compressors in the oil and gas industry			2/0/1	PED190
4309		3	TEC135	Machines and equipment of pumping and compressor stations	5	3	2/0/1	PED191
			TEC106	Machines and equipment for gas and oil pipelines			2/0/1	PED192
			PED422	Design of mining transport vehicles and fixed installations			2/0/1	TEC105
			PED421	Construction of mining transport vehicles and fixed installations			2/0/1	TEC105
			PED151	Lubrication of metallurgical machines			2/0/1	TEC112
			PED420	Repair manufacture of metallurgical enterprises			2/0/1	TEC180
4310		3	PED193	Instrumentation and automation of technological machines	5	3	2/0/1	PED190
			PED162	Technical diagnostics of oil and gas machines and equipment			2/0/1	PED191
			PED194	Automation of control of technological machines and equipment			2/0/1	PED192
			TEC114	Lifting installations			2/0/1	PHY112
			TEC126	Vertical transport in mines			2/0/1	PHY112
			PED135	Designing of metallurgical shops			2/0/1	TEC141
4311		3	PED183	The equipment for the hydrometallurgical production	5	3	2/0/1	TEC137
			PED170	Calculation and design of drilling equipment			2/0/1	TEC109
			PED155	Calculation and design of oil and gas equipment			2/0/1	TEC134
			PED156	Design of oil and gas machines and equipment			2/0/1	TEC133
			PED417	Automation and calculation of parameters of mining machines and fixed installations			2/0/1	GEN125
			PED419	Computer Computing Technology in Mining Machines			2/0/1	GEN125
4312		3	TEC110	Equipment 3-5 redistribution	5	3	2/0/1	TEC141
			TEC139	Mechanical equipment of metallurgical plants. Part 3			2/0/1	TEC138
			PED196	Energy-saving technologies in the oil and gas industry			2/0/1	TEC104
			PED416	Innovative technology and technology in the oil and gas industry			2/0/1	TEC130
			PED198	Basics of designing repair enterprises			2/0/1	TEC131
			TEC123	Internship transport			2/0/1	TEC121
4312		3	PED169	Hoisting machines	5	3	2/0/1	TEC121
			PED176	Construction of metallurgical machines			2/0/1	GEN125
			PED177	Designing of metallurgical machines			2/0/1	GEN104
			PED160	Installation and repair of oil and gas equipment			2/0/1	TEC109
			PED161	Operation and repair of oilfield machines and equipment			2/0/1	TEC134
			PED195	Operation, repair and installation of drilling equipment			2/0/1	TEC133
Total:					18			

Credits numbers of elective disciplines over the entire period of study	
Cycles of disciplines	Credits
Cycle of general disciplines (G)	5
Cycle of basic disciplines (B)	27
Cycle of special disciplines (S)	30
TOTAL:	62

Major curriculum SB072400 - "Technological machine and equipment" approved by Rector of Satbayev University, dated __. __. 201__.

By the decision of the Academic Council Satbayev University. Minutes № __, dated " __ " __ 20__.

By the decision of the Educational and Methodological Board of Satbayev University. Minutes № __, dated " __ " __ 20__.

By the decision of Academic council of Mining and metallurgy institute named after O.A. Baykonurov. Minutes № __ " __ " __ 201__.

Chairman of the Academic Planning Committee

Director of the Mining and smelting institute

Head of the department "Technological machines and equipment"

Representative of Specialty council

