



WORKING CURRICULUM for 2021-2022 academic year admission  
Educational program 6B07107 - Operation and Service Engineering  
Group of Educational programs B064 - "Mechanics and metal working"

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	IWS (including IWSI), in hours	IWS (including IWSI), in hours	Code	pre-requisites
<b>1 semester (fall 2021)</b>									
1	LNG108	English	G	5	150	0/0/3	105		Diagnostic test
	LNG104	Kazakh (Russian) language	G	5	150	0/0/3	105		Diagnostic test
	HUM100	Modern history of Kazakhstan	G	5	150	1/0/2	105		
	PHY111	Physics I	B	5	150	1/1/1	105		
	MAT101	Mathematics I	B	5	150	1/0/2	105		
	HUM128	Political science	G	2	60	1/0/0	45		
	KFK101	Physical education I	G	2	60	0/0/2	30		
Total:				29		18			
<b>3 semester (fall 2022)</b>									
2	CSE677	Information and Communication technology	G	5	150	2/1/0	105		
	HUM127	Sociology	G	2	60	1/0/0	45		
	CHE452	Ecology and sustainable development	G	2	60	1/0/0	45		
	GEN411	Theoretical and applied mechanics	B	5	150	2/1/0	105		
	ELC186	Electrotechnics	B	5	150	2/1/0	105		
	TEC463	Interchangeability, standardization and technical measurements	B	5	150	2/0/1	105		
	GEN177	Engineering and computer graphics	B	5	150	1/0/2	105		
KFK103	Physical education III	G	2	60	0/0/2	30			
Total:				31		19			
<b>5 semester (fall 2023)</b>									
3	NSE143	Industrial economics	B	5	150	2/0/1	105		
	PED103	Theoretical foundations of mechanical engineering	B	5	150	2/0/1	105		
	3216	Elective	B	5	150		105		
	3217	Elective	B	5	150		105		
	3301	Elective	S	5	150		105		
	3302	Elective	S	5	150		105		
Total:				30		18			
<b>7 semester (fall 2024)</b>									
4	4305	Elective	S	5	150		105		
	4306	Elective	S	5	150		105		
	4307	Elective	S	5	150		105		
	4308	Elective	S	5	150		105		
	4309	Elective	S	5	150		105		
Total:				25		15			

Code	Name of discipline	Cycle	Credits	Total hours	IWS (including IWSI), in hours	Code	pre-requisites
<b>2 semester (spring 2022)</b>							
LNG108	English	G	5	150	0/0/3	105	
LNG104	Kazakh (Russian) language	G	5	150	0/0/3	105	
1204	Elective	B	5	150	2/0/1	105	
PHY112	Physics II	B	5	150	1/1/1	105	
MAT102	Mathematics II	B	5	150	1/0/2	105	
HUM129	Culturology	G	2	60	1/0/0	45	
CHE495	Chemistry	B	5	150	1/1/1	105	
KFK102	Physical education II	G	2	60	0/0/2	30	
Total:				34		21	
<b>4 semester (spring 2023)</b>							
HUM132	Philosophy	G	5	150	1/0/2	105	
HUM122	Psychology	G	2	60	1/0/0	45	
MNG487	Fundamentals of Entrepreneurship, Leadership and Anti-corruption culture	G	3	90	1/0/1	60	
CHE451	Life safety	G	2	60	1/0/0	45	
GEN125	Bases of designing and details of cars	B	5	150	1/1/1	105	
PED104	The branch Materials and Structural Materials Technology	B	5	150	2/1/0	105	
TEC164	Basics of thermodynamics and heat engineering installations	B	5	150	2/0/1	105	
KFK104	Physical education IV	G	2	60	0/0/2	30	
Total:				29		18	
<b>6 semester (spring 2024)</b>							
SAF110	Labor protection	B	5	150	1/0/2	105	
PED446	Basics of hydraulics and hydraulic drives of technological machines	B	5	150	2/0/1	105	
PED121	Installation and exploitation of technological machines	S	5	150	2/0/1	105	
TEC185	Technology of repair and operation of technological machines	S	5	150	2/0/1	105	
TEC470	Hydraulics and hydraulic drive of technological machines	B	5	150	2/0/1	105	
3221	Elective	B	5	150		105	
Total:				30		18	
<b>8 semester (spring 2025)</b>							
4310	Elective	S	5	150		105	
4311	Elective	S	5	150		105	
ECA003	Preparation and writing of the thesis (project)	FA	6				
ECA103	Graduate thesis (project) defense	FA	6				
Total:				22		6	

Year of	Code	Name of discipline	Cycle	Credits	Semester
<b>Mandatory types of training with a P/NP rating</b>					
1	AAP101	Internship	B	2	2
2	AAP109	Industrial internship I	B	5	4
3-4	AAP158	Industrial internship II	S	5	6
<b>Additional types of training</b>					
1		Sports club sectional	G	0	5-7
2-3	AAP500	Military training	G	0	3-6

Cycle of disciplines	Credits		
	compulsory	elective	total
Cycle of general disciplines (G)	51	7	58
Cycle of basic disciplines (B)	112		112
Cycle of special disciplines (S)	60		60
<b>Total of theoretical study:</b>			<b>223</b>
Final attestation (FA)	12		12
<b>Total:</b>			<b>242</b>

Decision of the Academic Council of KazNRTU named after K. Satbayev. Minutes #3, dated 25.06.2021  
 Decision of the Educational and Methodological Council of KazNRTU named after K. Satbayev. Minutes #6, dated 14.06.2021  
 Decision of the Academic Council of the School of Metallurgy and Industrial Engineering. Minutes #12, dated 07.08.2021.

Vice-Rector for Academic Affairs: A. Zhautikov  
 Director of the Institute of Metallurgy and Industrial Engineering: B. Rysbekov  
 Head of department TMT&L: K.K. Yelemessov  
 Representative of Specialty council: M.A. Kanatbaev