



CURRICULUM
of Educational Program on enrollment for 2022-2023 academic year

Educational program 7M07111 - "Digital Engineering of Machines and Equipment"
Group of educational programs M103 - "Mechanics and metal working"

Form of study: full-time Duration of study: 2 year Academic degree: Master of Technical Sciences

Discipline code	Name of disciplines	Cycle	Total amount in credits	Total hours	Classroom amount lec/lab/pr	SIS (including TSIS) in hours	Form of control	Allocation of face-to-face training based on courses and semesters			
								1 course		2 course	
								1 semester	2 semester	3 semester	4 semester
CYCLE OF BASIC DISCIPLINES (BD)											
Social and social module											
M-1. Module of basic training (university component)											
LNG210	English (professional)	BD UC	5	150	0/0/3	105	E	5			
HUM214	Management Psychology	BD UC	3	90	1/0/1	60	E		3		
HUM212	History and philosophy of science	BD UC	3	90	1/0/1	60	E		3		
HUM213	Higher school pedagogy	BD UC	3	90	1/0/1	60	E	3			
Professional Engineering Training Module											
Component of choice											
TEC701	Intellectual Property Protection	BD CCH	5	150	2/0/1	105	E	5			
TEC702	Licensing and copyright		5	150	2/0/1	105	E				
TEC297	Innovative installation and commissioning methods for machines and equipment	BD CCH	5	150	2/0/1	105	E	5			
TEC700	The system of full maintenance Technological machines and equipment		5	150	2/0/1	105	E				
TEC706	Innovative drives of machinery and equipment	BD CCH	5	150	2/0/1	105	E			5	
TEC707	Innovative technologies for monitoring and diagnosing the state of technological machines		5	150	2/0/1	105	E				
CYCLE OF PROFILE DISCIPLINES (PD)											
The module of innovative technologies											
M-2. Module of professional activity (university component, component of choice)											
TEC703	Digital methods and means of measuring the parameters of technological machines	PD UC	5	150	2/0/1	105	E	5			
TEC705	Digital monitoring of machines and equipment	PD UC	5	150	2/0/1	105	E	5			
TEC710	Predictive maintenance systems for process equipment	PD UC	5	150	2/0/1	105	E		5		
TEC709	Energy-saving technologies in the operation of technological machines	PD UC	5	150	2/0/1	105	E			5	
Component of choice											
TEC711	The use of digital technology in the design and construction of technological machines	PD CCH	5	150	2/0/1	105	E			5	
TEC712	Innovative equipment and technologies in industry		5	150	2/0/1	105	E				
TEC715	Intelligent management of technological equipment complexes	PD CCH	5	150	2/0/1	105	E	5			
TEC716	Heattechnical equipment and power plants		5	150	2/0/1	105	E				
TEC723	Instrumentation and equipment technology machines and equipment	PD CCH	5	150	2/0/1	105	E	5			
TEC719	Innovative technologies in the practice of maintenance and repair of technological machines		5	150	2/0/1	105	E				
MNG705	Project Management	PD CCH	5	150	2/0/1	105	E	5			
TEC713	Innovative methods for repairing machine parts		5	150	2/0/1	105	E				
TEC714	Theory and practice of operation and repair of hydro machines and compressors	PD CCH	5	150	2/0/1	105	E			5	
TEC718	Innovative construction materials of technological machines	PDCCH	5	150	2/0/1	105	E	5			
TEC717	Lubricants and lubrication system for		5	150	2/0/1	105	E				
M-3. Practice-oriented module											
AAP229	Pedagogical practice	BD UC	6					6			
AAP256	Research practice	PD, CCH	4							4	
M-4. Experimental research module											
AAP251	Research work of a master's student, including internship and completion of a master's thesis	RWMS UC	2					2			
AAP241	Research work of a master's student, including internship and completion of a master's thesis	RWMS UC	3					3			

AAP254	Research work of a master's student, including internship and completion of a master's thesis	RWMS UC	5						5		
AAP255	Research work of a master's student, including internship and completion of a master's thesis	RWMS UC	14							14	
M-5. Module of final attestation											
ECA205	Preparation and defense of a master's thesis	FA	12							12	
Total based on UNIVERSITY:								20	20	10	30
								40		40	

Number of credits for the entire period of study					
Cycle code	Cycles of disciplines	Credits			
			university component (UC)	component of choice (CCH)	Total
BD	Cycle of basic disciplines		20	15	35
PD	Cycle of profile disciplines		25	24	49
	<i>Total for theoretical training:</i>	<i>0</i>	<i>45</i>	<i>39</i>	<i>84</i>
	RWMS				24
FA	Final attestation	12			12
	TOTAL:	12	45	39	120

Decision of the Academic Council of Kazntu named after K.Satpayev. Protocol № 13 or "28" 04.20.22y.

Decision of the Educational and Methodological Council of Kazntu named after K.Satpayev. Protocol № 7 or "26" 04.20.22y.

Decision of the Academic Council of the Institute E&ME. Protocol № 5 or "20" 01.20.22y.

Vice-Rector for Academic Affairs

Director of Institute of E&ME

Head of department TM&T

Representative of the Council from employers

B.A. Zhautikov

K.K. Yelemessov

S.A. Bortebayev

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