



WORKING CURRICULUM for 2020-2022 academic year admission
Educational program ED07110 - "Digital engineering of machinery and equipment (Phd doctor)."
Group of Educational programs D103 - "Mechanics and metal working"

Full-time study Study duration : 3 years Academic degree: Ph.D

Year of study	Code	Name of discipline	Cycle	Total Credits	Total hours	lect/typr	IWS (including IWSI), in hours	pre-requisites	Code	Name of discipline	Total Credits	Total hours	lect/typr	IWS (including IWSI), in hours	pre-requisites
1 semester															
1	MET322	Research methods	BD IC	3	150	2/0/1	105		AAP345	Doctoral student research work, including internship and doctoral dissertation	DSRW	24			
	LNG305	Academic writing	BD IC	3	150	2/0/1	105		AAP350	Pedagogical practice	BD	10			
	TEC314	Innovative technology and technology in science and production	BD IC	5	150	2/0/1	105								
	TEC315	Management in planning the repair and maintenance of machines	PS OC	5	150	2/0/1	105								
	TEC316	Methods and tools for diagnosing the technical condition of machines and mechanisms													
	TEC317	Digitization of operational and service processes													
	TEC318	Digital technologies in science and education	PS OC	5	150	2/0/1	105								
	Total:			25					Total:		34				
2 semester															
2	AAP345	Doctoral student research work, including internship and doctoral dissertation	DSRW	24					AAP346	Doctoral student research work, including internship and doctoral dissertation	DSRW	25			
	AAP355	Research practice	PS	10											
	Total:			34					Total:		25				
3 semester															
3	AAP346	Doctoral student research work, including internship and doctoral dissertation	DSRW	25					AAP346	Doctoral student research work, including internship and doctoral dissertation	DSRW	25			
									ECA303	Writing and defending a doctoral dissertation	FA	12			
	Total:			25					Total:		37				
4 semester															
									Total:		180				

Decision of the Academic Council KazNRTU named after K. I. SATPAYEV, Minutes # 3, dated 25.06 2021.

Decision of the Academic Council of the Institute of Metallurgy and Industrial Engineering, Minutes # 16, dated 07.06 2021.

Vice-Rector for Academic Affairs

 B.A. Zhanibekov

Director of the School of Metallurgy and Industrial Engineering

 K.O. Rysbekov

Head of department "Technological machines and transport"

 K.K. Yelmenov

Total number of credits	
Cycle of disciplines	Credits
Cycle of general disciplines	0
Cycle of basic disciplines (BD IC, BD OC)	25
Cycle of special disciplines (PS IC, PS OC)	20
Total of theoretical study :	45
DSRW	123
Writing and defending a doctoral dissertation	12
Total:	180