



WORKING CURRICULUM

Academic year	2025-2026 (Autumn, Spring)
Group of educational programs	D103 - "Mechanics and metal working"
Educational program	8D07111 - "Digitalization of engineering manufacturing"
The awarded academic degree	Doctor of Philosophy PhD
Form and duration of study	full time (scientific and pedagogical track) - 3 years

Discipline code	Name of disciplines	Block	Cycle	Total ECTS credits	Total hours	lek/lab/pr Contact hours	in hours SIS (including TSIS)	Form of control	Allocation of face-to-face training based on courses and semesters						Prerequisites	
									1 course		2 course		3 course			
									1 sem	2 sem	3 sem	4 sem	5 sem	6 sem		
CYCLE OF GENERAL EDUCATION DISCIPLINES (GED)																
CYCLE OF BASIC DISCIPLINES (BD)																
M1 Technical training module																
MET322	Methods of scientific research		BD, UC	5	150	30/0/15	105	E	5							
LNG305	Academic writing		BD, UC	5	150	0/0/45	105	E	5							
MSM308	Digital factory technologies	1	BD, CCH	5	150	30/0/15	105	E	5							
MNG350	Sustainability Science	1	BD, CCH	5	150	30/0/15	105	E	5							
MNG349	Intellectual property and the global market	1	BD, CCH	5	150	30/0/15	105	E	5							
M3 Practice-oriented module																
AAP350	Pedagogical practice		BD, UC	10				R		10						
CYCLE OF PROFILE DISCIPLINES (PD)																
M2 Digital Engineering Module																
IND311	Advanced Systems of Manufacturing	1	PD, CCH	5	150	30/0/15	105	E	5							
IND308	Advanced Digital Manufacturing Design	1	PD, CCH	5	150	30/0/15	105	E	5							
IND317	Advanced Design of Industrial Experiments	2	PD, CCH	5	150	30/0/15	105	E	5							
IND321	Advanced Decision Analysis	2	PD, CCH	5	150	30/0/15	105	E	5							
M3 Practice-oriented module																
AAP355	Research practice		PD, UC	10				R			10					
M4 Experimental research module																
AAP336	Research work of the doctoral student, including internships and doctoral dissertation		RWDS	5				R	5							
AAP347	Research work of the doctoral student, including internships and doctoral dissertation		RWDS	20				R		20						
AAP347	Research work of the doctoral student, including internships and doctoral dissertation		RWDS	20				R			20					
AAP356	Research work of the doctoral student, including internships and doctoral dissertation		RWDS	30				R				30				
AAP356	Research work of the doctoral student, including internships and doctoral dissertation		RWDS	30				R					30			
AAP348	Research work of the doctoral student, including internships and doctoral dissertation		RWDS	18				R							18	
M5 Module of final attestation																
ECA325	Final examination (writing and defending a doctoral dissertation)		FA	12											12	
Total based on UNIVERSITY:										30	30	30	30	30	30	

	60	60	60	
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Number of credits for the entire period of study					
Cycle code	Cycles of disciplines	Credits			
		Required component (RC)	University component (UC)	Component of choice (CCH)	Total
GED	Cycle of general education disciplines	0	0	0	0
BD	Cycle of basic disciplines	0	20	5	25
PD	Cycle of profile disciplines	0	10	10	20
Total for theoretical training:		0	30	15	45
RWDS	Research Work of Doctoral Student				123
ERWDS	Experimental Research Work of Doctoral Student				0
FA	Final attestation				12
TOTAL:					180

Decision of the Educational and Methodological Council of KazNRTU named after K.Satpayev. Minutes № 3 dated 20.12.2024

Decision of the Academic Council of the Institute. Minutes № 3 dated 19.12.2024

Signed:

Governing Board member - Vice-Rector for Academic Affairs

Uskenbayeva R. K.

Approved:

Vice Provost on academic development

Kalpeyeva Z. B.

Head of Department - Department of Educational Program
Management and Academic-Methodological Work

Zhumagaliyeva A. S.

Director of the Institute - A.Burkitbaev Institute of Energy
and Mechanical Engineering

Yelemesov K. .

Department Chair - Mechanical Engineering

Nugman E. .

Representative of the Academic Committee from Employers

Andreev V. I.

____Acknowledged____

