



«APPROVED»
Decision of the Academic Council
NPJSC «KazNRTU»
named after K.Satbayev»
dated 06.03.2025 Minutes № 10

WORKING CURRICULUM

Academic year

2025-2026 (Autumn, Spring)

Group of educational programs

M094 - "Information technologies"

Educational program

7M06103 - "Management of information systems"

The awarded academic degree

Master of Technical Sciences

Form and duration of study

full time (scientific and pedagogical track) - 2 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		
									1 sem	2 sem	3 sem	4 sem	
CYCLE OF GENERAL EDUCATION DISCIPLINES (GED)													
CYCLE OF BASIC DISCIPLINES (BD)													
M-1.Module of basic training (university component)													
LNG213	Foreign language (professional)		BD, UC	3	90	0/0/30	60	E	3				
HUM214	Psychology of management		BD, UC	3	90	15/0/15	60	E	3				
CSE768	Analysis and modeling of information systems	1	BD, CCH	5	150	15/0/30	105	E	5				
SEC249	Methods of computer simulation	1	BD, CCH	5	150	30/0/15	105	E	5				
MNG781	Intellectual property and research	1	BD, CCH	5	150	30/0/15	105	E	5				
HUM212	History and philosophy of science		BD, UC	3	90	15/0/15	60	E		3			
HUM213	Higher school pedagogy		BD, UC	3	90	15/0/15	60	E		3			
SEC241	Database development in Microsoft SQL Server environment	1	BD, CCH	5	150	30/0/15	105	E		5			
SEC244	Security of Virtualization and Cloud Systems	1	BD, CCH	5	150	30/0/15	105	E		5			
CSE773	Artificial intelligence methods	2	BD, CCH	5	150	30/0/15	105	E		5			
CSE774	Web Mining	2	BD, CCH	5	150	30/0/15	105	E		5			
MNG782	Sustainable development strategies	2	BD, CCH	5	150	30/0/15	105	E		5			
M-3. Practice-oriented module													
AAP273	Pedagogical practice		BD, UC	8				R			8		
CYCLE OF PROFILE DISCIPLINES (PD)													
M-2. Module of professional activity (university component, component of choice)													
CSE770	Methodology of scientific research and innovation		PD, UC	5	150	30/0/15	105	E	5				
CSE203	The architecture of information systems		PD, UC	5	150	15/15/15	105	E	5				
CSE767	Data mining	1	PD, CCH	5	150	30/0/15	105	E	5				
CSE207	Methods of modeling business processes	1	PD, CCH	5	150	30/0/15	105	E	5				
CSE765	IT management		PD, UC	5	150	30/0/15	105	E		5			
CSE219	Theory and practice of statistics	1	PD, CCH	5	150	15/15/15	105	E		5			
SEC230	Applied statistics and data analysis	1	PD, CCH	5	150	15/0/30	105	E		5			

SEC246	Big Data and Data Analysis	1	PD, CCH	5	150	30/15/0	105	E			5		
CSE746	Machine Learning & Deep Learning	1	PD, CCH	5	150	30/0/15	105	E			5		
CSE764	Cloud computing	2	PD, CCH	5	150	30/0/15	105	E			5		
SEC232	Business Intelligence	2	PD, CCH	5	150	30/0/15	105	E			5		
CSE211	Models and methods of decision-making in IP	3	PD, CCH	5	150	15/15/15	105	E			5		
CSE769	Methods and tools for building information retrieval systems	3	PD, CCH	5	150	30/0/15	105	E			5		
SEC243	Intellectual methods of data processing	4	PD, CCH	5	150	15/15/15	105	E			5		
CSE205	Geographic information systems	4	PD, CCH	5	150	15/15/15	105	E			5		
SEC255	Pattern recognition and object identification		PD, UC	4	120	15/0/30	75	E				4	

M-3. Practice-oriented module

AAP256	Research practice		PD, UC	4				R				4	
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M-4. Experimental research module

AAP268	Research work of a master's student, including internship and completion of a master's thesis		RWMS	4				R	4				
AAP268	Research work of a master's student, including internship and completion of a master's thesis		RWMS	4				R		4			
AAP251	Research work of a master's student, including internship and completion of a master's thesis		RWMS	2				R			2		
AAP255	Research work of a master's student, including internship and completion of a master's thesis		RWMS	14				R				14	

M-5. Module of final attestation

ECA212	Registration and protection of the master thesis		FA	8							8		
Total based on UNIVERSITY:									30	30	30	30	
									60		60		

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	15	35
PD	Cycle of profile disciplines	0	23	30	53
Total for theoretical training:		0	67	45	112
RWMS	Research Work of Master's Student				0
ERWMS	Experimental Research Work of Master's Student				0
FA	Final attestation				8
TOTAL:					120

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 № 4 dated 22.11.2024

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.

acting Director of Institute - Institute of Automation and Information Technologies

Chinibayev Y. T.

Department Chair - Cybersecurity, information processing and storage

Satybaldiyeva R. Ж.

Representative of the Academic Committee from Employers
____ Acknowledged ____

Mamyrbayev O. Z.

