KAZAKH NATIONAL RESEARCH TECHNICAL UNIVERSITY named after K.I.SATPAYEV

APPROVED
Chairman of the Management Board-
Rector of Kaznitu named after K.Satpayev
M.M. Begentaev
_____ 2022 y.

CURRICULUM

of Educational Program on enrollment for 2022-2023 academic year

Educational program 6B06107 "Financial Analytics"

Form of study: full-time | Duration of study: 4 years | Academic degree: Bachelor of Engineering and Technology

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							
								I course		II course		III course		IV course	
								1 semester	2 semester	3 semester	4 semester	5 semester	6 semester	7 semester	8 semester
CYCLE OF GENERAL EDUCATION DISCIPLINES (GED)															
M-1. Module of language training															
LNG108	English language	GED, RC	10	300	0/0/6	210	E	5	5						
LNG104	Kazakh (Russian) language	GED, RC	10	300	0/0/6	210	E	5	5						
M-2. Module of physical training															
KFK101-104	Physical Culture	GED, RC	8	240	0/0/8	120	Difcredit	2	2	2	2				
M-3. Module of information technology															
CSE677	Information and communication technologies (in English)	GED, RC	5	150	2/1/0	105	E	5							
M-4. Socio-cultural development module															
HUM137	Modern History of Kazakhstan	GED, RC	5	150	1/0/2	105	E		5						
HUM132	Philosophy	GED, RC	5	150	1/0/2	105	E				5				
HUM120	Module of socio-political knowledge (sociology, political science)	GED, RC	3	90	1/0/1	60	E				3				
HUM134	Module of socio-political knowledge (cultural studies, psychology)		5	150	2/0/1	105	E			5					
M-5. Economics and Entrepreneurship Basics Module															
HUM136	Fundamentals of anti-corruption culture and law	GED, RC	5	150	2/0/1	105	E			5					
MNG489	Fundamentals of Economics and Entrepreneurship														
HYD438	Ecology and life safety														
LOG524	Fundamentals of Scientific Research Methods														
CYCLE OF BASIC DISCIPLINES (BD															
M-6. Math module															
MAT101	Mathematics 1	BD, UC	5	150	1/0/2	105	E	5							
MAT102	Mathematics 2	BD, UC	5	150	1/0/2	105	E		5						
MAT103	Mathematics 3	BD, UC	5	150	1/0/2	105	E			5					
CSE505	Discrete Math	BD, UC	5	150	1/0/2	105	E				5				
M-7. Basic training module															
CSE155	Algorithmization and programming basics	BD, UC	5	150	1/1/1*	105	E		5						
CSE164	Algorithms and data structures	BD, UC	6	180	1/1/1*	120	E			6					
CSE127	Object Oriented Programming	BD, UC	5	150	1/1/1*	105	E				5				
CSE803	Information Design	BD, UC	4	120	0/0/3	75	E	4							
NSE459	Statistics	BD, UC	6	180	2/0/2	120	E		6						
NSE460	Econometrics	BD, UC	5	150	2/0/1	105	E			5					
MNG493	Accounting Principles	BD, UC	5	150	2/0/1	105	E			5					
NSE454	Simulation modeling of financial and economic systems	BD, UC	4	120	1/1/1*	75	E						4		
NSE451	Financial Accounting for Analytical Solutions	BD, UC	5	150	2/0/1	105	E					5			
NSE452	Management Accounting for Analytical Solutions	BD, UC	5	150	2/0/1	105	E					5			
MNG400	Data Analysis in Excel	BD, UC	5	150	2/0/1	105	E					5			
NSE464	IT project management	BD, UC	4	120	2/0/1	75	E						4		
NSE465	Big Data Processing Algorithms	BD, UC	5	150	1/1/1*	105	E						5		
MNG540	Statistical Analysis for Finance	BD, UC	5	150	2/0/1	105	E							5	
MNG542	Business strategy and policy														
NSE181	Taxes and taxation	BD, UC	4	120	2/0/1	75	E							5	
MNG422	Financial control and audit														
NSE456	Analysis of data with time structure	BD, UC	5	150	1/1/1*	105	E								5
NSE457	Introduction to stochastic processes and simulation models														
NSE461	Generative models	BD, UC	5	150	1/0/2	105	E							5	
MNG548	Financial Data Analytics in Python														
MNG546	Financial technology	БД КВ	5	150	2/0/1	105	E								5
NSE453	Financial Data Analytics in Python 2														
NSE462	Neural networks	БД КВ	4	120	1/1/1*	75	E								4
NSE463	Reinforcement learning														
AAP167	Educational practice	БД ВК	1		0/0/1	105	E		1						

CYCLE OF MAIN DISCIPLINES (PD)															
M-8. Professional activity module															
CSE698	NoSQL databases and application development	PD, UC	5	150	1/1/1	105	E						5		
MNG497	Evaluation of financial statements	PD, UC	4	120	2/0/1	75	E							4	
NSE435	Financial econometrics	PD, UC	5	150	2/0/1	105	E				5				
CSE688	Statistical data analysis tools	PD, UC	5	150	1/1/1	105	E					5			
CSE115	Data Mining	PD, UC	5	150	2/1/0*	120	E						5		
CSE694	Databases and Application Development	PD, UC	5	150	1/1/1*	105	E					5			
SEC402	Cyber Security Basics	PD, UC	5	150	1/1/1*	105	E					5			
CSE533	Methods for analyzing and processing big data	PD, UC	5	150	1/1/1*	105	E							5	
CSE691	Blockchain technology	PD, UC	5	150	2/0/1	105	E							5	
MNG486	Financial management	PD, UC	5	150	2/0/1*	105	E								5
CSE504	Green technologies	PD, UC	5	150	2/0/1	105	E						5		
NSE455	Structural analysis and visualization of networks	PD, UC	4	120	1/1/1*	75	E							4	
NSE458	Running ML models in an industrial environment														
AAP168	Industrial practice I	PD, UC	2		0/0/1						2				
AAP403	Industrial practice II	PD, UC	3		0/0/3								3		
M-9. Final certification module															
ECA108	final examination	FA	8												8
M-10. Additional training module															
AAP500	Military training	ATT	0												
Total for the UNIVERSITY:								26	34	33	27	30	30	33	27
								60		60		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	51	5		56
BD	Cycle of basic disciplines		85	29	114
PD	Cycle of profile disciplines		58	4	62
	Total for theoretical training:	*51*	*148*	*33*	*232*
FA	final attestation	8			8
	TOTAL:	**59**	**148**	**33**	**240**

Decision of the Academic Council of Kazntu named after K.Satpayev. Protocol №16 от "1" 06 2023.

Decision of the Educational and Methodological Council of Kazntu named after K.Satpayev. Protocol №5 от "02" 02 2023.

Decision of the Academic Council of the Institute_____. Protocol №6 от "13" 02 2023.

Vice-Rector for Academic Affairs — **Zhautikov B.**

Institute Director of Project Management — **Amralinova B.**

Department Head Institute of Project Management — **Turegeldinova A.**

Council representative from employers — **Amankulov M.**