

Institute of Project Management Department of Logistics

#### EDUCATIONAL PROGRAM <u>8D11301 Transport services</u> Code and name of educational program

Code and classification of the field of education: **8D11 Services** Code and classification of training directions: **8D11 Transport services** Group of educational programs: **D147 Transport services** Level based on NQF:**8** Level based on IQF:**8** Study period:**3** Amount of credits:**180** 

Almaty 2023

Educational program <u>8D11301 Transport services</u> code and name of educational program was approved at the meeting of K.I. Satbayev KazNRTU Academic Council

Protocol № 3 dated « 27 » \_10\_2022.

was reviewed and recommended for approval at the meeting of K.I. Satbayev KazNRTU Educational and Methodological Council

Protocol № 2 dated «\_21\_\_\_» \_10\_2022

#### NCJS «KAZAKH NATIONAL RESEARCH TECHNICAL UNIVERSITY named after K.I.SATBAYEV»

Educational program «8D11301 Transport services»

was developed by Academic committee based on direction <u>«8D11 Transport</u> services»

Full name	Academic degree/ academic title	Position	Workplace	Signature
Chairperson of A	Academic Committee:		No. A. S. Commercial Street	
Mukhanova Gulmira Samudinovna	Candidate of Technical Sciences, Associate Professor	Head of the Department	"Kazakh National Research Technical University named after K.I.Satpayev", mobile phone: +77019937718	Fh-
Teaching staff:	1			
Bekzhanova Saule Ertayevna	Doctor of Technical Sciences, Professor	Professor	"Kazakh National Research Technical University named after K.I.Satpayev", mobile phone: +77017994770	OBegs
Saltanat Bolatovna	Candidate of Economic Sciences	Assistant Professor	"Kazakh National Research Technical University named after K.I.Satpayev", mobile phone: +77057696077	fresh
Tymbaeva Zhazira Muratbekovna	Candidate of Economic Sciences	Associate Professor	"Kazakh National Research Technical University named after K.I.Satpayev", mobile phone: +77017867603	laf
Tyshkanbayeva Mansia Bukarina	Candidate of Physical and Mathematical Sciences, Associate Professor	Associate Professor	"Kazakh National Research Technical University named after K.I.Satpayev", mobile phone: +77472870472	Ref.
Employers:		4:		
Tulebaev Madiyar		Director	TOO «ZhebeLogistics»,	bergy
Medetbekov Serik Muratbekovich		Associate Director	ТОО «Туркестан - INVEST»	Alton
Students				
Kozhataev Sauran		2nd year doctoral	"Kazakh National Research Technical	

F KazNRTU 703-05 Educational program

F KazNRTU 703-05 Educational program

	student	University named after K.I.Satpayev", mobile phone: +77788929235
Mailybayeva Aina	4th year student	"Kazakh National Research Technical University named after K.I.Satpayev", Mobile phone: +77013821226
Narynbay Rauan Zhandauletuly	Master's student 2nd year	"Kazakh National Research Technical University named after K.I.Satpayev", mobile phone: +77052010290

### NCJS «KAZAKH NATIONAL RESEARCH TECHNICAL UNIVERSITY named after K.I.SATBAYEV»

F KazNRTU 703-05 Educational program

#### **Table of contents**

List of abbreviations and designations

- 1. Description of educational program
- 2. Purpose and objectives of educational program
- 3. Requirements for the evaluation of educational program learning outcomes
- 4. Passport of educational program
- 4.1. General information
- 4.2. Relationship between the achievability of the formed learning outcomes according to educational program and academic disciplines
- 5. Curriculum of educational program
- 6. Additional educational programs (Minor)

#### List of abbreviations and designations

EP - educational program

NRK - National Qualification Framework

IRK - Industry Qualification Framework

### **1. Description of educational program**

EP "8D11301 - Transport Services" is aimed at training a specialist who can carry out labour activity in international, state, research, scientific and pedagogical, design and design and technological institutions, as well as in industrial companies, regional transport cluster organisations of the transport sector of the national economy, based on the application of innovative, organisational, managerial, scientific and pedagogical innovations in the field of transport services.

#### 2. Purpose and objectives of educational program

**Purpose of EP:** Training of highly qualified scientific, pedagogical and managerial personnel with methodological knowledge and professional competencies in making innovative decisions, to analyze and forecast the results of research activities in the field of transport flow and process management

#### Tasks of EP:

- providing the domestic labor market with highly qualified scientific personnel for the formation of a sustainable national economy with a high level of competitiveness on a global scale;

- the formation of scientists of a new generation capable of systemic and critical thinking in conditions of deep transformation at the worldview level;

- development of an environment that ensures the continuous development of scientific thought for the benefit of society as a whole;

- implementation of research work, organization and implementation of educational activities, taking into account the latest achievements of domestic and world science and practice;

- formation of sustainable partnerships with leading universities of near and far abroad for the purpose of open and mutually beneficial cooperation in the global educational and scientific space.

### **3.** Requirements for evaluating the educational program learning outcomes

#### 4. Passport of educational program

**4.1.** General information

N⁰	Field name	Comments
1	Code and classification of the	8D11 Services
	field of education	
2	Code and classification of	8D113 Transport services
	training directions	

<u> </u>		
3		
4	* *	
5	_	
	program	
		design and design and technological institutions, as well
		as in industrial companies, regional transport cluster
	Educational program name 8D11301 Transport services   Short description of educational program EP "8D11301 - Transport Services" is aimed at trai specialist who can carry out labour activi international, state, research, scientific and pedag design and design and technological institutions, a as in industrial companies, regional transport organisations of the transport sector of the m economy, based on the application of inno organisational, managerial and scientific and pedag innovations in the field of transport services.   Purpose of EP Training of highly qualified scientific, pedagogic managerial personnel with methodological knowled professional competencies in making inno decisions, to analyze and forecast the results of re activities in the field of transport flow and p management   Type of EP New EP   The level based on NQF 8   O Distinctive features of EP no   List of competencies educational program of to be able to carry out scientific activities in the paradigm of modern trends in the global and nationa education strategy; - to be able to organize the process of education and upbringing as a dynamic system in accordance with modern strategy of education; - to be able to critically analyze and evaluate moder scientific achievements, generate new ideas in solvir research and practical problems, including in interdisciplinary areas; - to be able to design and carry out comprehensive research, including interdisciplinary ones, based on holistic systemic scientific outook using knowledge the field of transport services and traffic flows; - to be able to solve standard tasks of professional ac using information and communication technologies; - to be able to think s	
6	Purpose of EP	
		managerial personnel with methodological knowledge and
		decisions, to analyze and forecast the results of research
		activities in the field of transport flow and process
		management
7	<b>71</b>	
8		
9		8
_		
11	1	
		educational space in accordance with the modern national
		upbringing as a dynamic system in accordance with the
		• •
		1 2 7
		holistic systemic scientific outlook using knowledge in
		-
		- to be able to implement scientific projects in the work of
		kazakh and international research teams to solve scientific
		-
		- to be able to solve standard tasks of professional activity
		•
		- to be able to think strategically and creatively, as well as
		creatively approach solving non-standard problems and
		situations;
12	-	· · · ·
	program	· · · · ·
		scientific research and the skills of searching, analyzing
		2. Solve theoretical and applied research problems of
		transport science using methods of system analysis and
		forecasting the activities of transport systems, networks,

	1.01
	processes and flows
	Be able to develop conceptual and simulation models of
	the activities of transport and logistics systems and
	networks, transport flows and logistics centers, conduct
	experimental research on the developed models, analyze
	the results of experiments and determine the optimal
	performance of the model
	4. Possess the methodology and methods of designing
	cargo supply networks, warehouse systems and transport
	and technological routes
	5. Carry out work on the design, improvement and
	reorganization of the activities of transport systems and
	networks, the development of projects and programs for
	the development of transport enterprises based on
	reengineering and modern research approaches
	6. Plan and carry out theoretical and experimental research
	on the management of transport enterprises, networks and
	flows using modern information technologies
	7. Perform patent search, study and analyze scientific and
	technical information, domestic and foreign experience on
	the topic under study
	8. Possess the skills of working with modern innovative
	and digital technologies in the field of transport logistics
	and management of transport complexes for the purpose
	of application in scientific research
	9. Demonstrate the skills of writing academic and
	scientific texts at various levels when performing research
	projects
13 Education form	full-time
14 Period of training	3
15 Amount of credits	180
16 Languages of instruction	kazakh russian
17 Academic degree awarded	PhD
18 Developer(s) and authors	Mukhanova Gulmira Samudinovna

#### 4.2. Relationship between the achievability of the formed learning outcomes based on educational program and academic disciplines

N⁰	Discipline	Short description of discipline	Amount			rated					codes	)
	name		of credits	LO1		LO 3						LO 9
					2		4	5	6	7	8	
		Cycle of bas										
	1	University	compone	nt	1			1	-	1		
1	Academic writing	The course is aimed at developing academic writing skills and writing strategies for doctoral students in the field of engineering and natural sciences. The course focuses on the basics and general principles of academic writing for; writing effective sentences and paragraphs; using tenses in scientific literature, as well as styles and punctuation; writing abstracts, introductions, conclusions, discussions, conclusions, literature and resources used; quoting in the text; preventing plagiarism, and making presentations at a conference.										V
2	Research methods	The course contributes to the formation of knowledge about the methods, methodology of scientific research, methods of collecting and processing scientific data, the principles of the organization of scientific research, the role of technical sciences, computer science and engineering research in modern science. The structure of technical sciences, the application of general scientific, philosophical, special methods of scientific research in theory and in practice are considered. <b>Cycle of bas</b>	ic discipli		V					V		
		Componer	nt of choice	1								1
	Simulation	Objectives of the course: the	5			V						
3	-	acquisition of knowledge by										
	transport and	PhD students about the theory										

	logistics	of simulation modelling and						
	U U	teaching innovative skills:						
		generating options, planning						
		experiments, comparing						
		options, evaluating options,						
		choosing options. Discipline						
		content: building a conceptual						
		model of the transport system.						
		Simulation studies in the field						
		of transport and industrial						
		logistics: - problem analysis; -						
		data collection; - development						
		of conceptual and simulation						
		models; - planning, execution						
		and evaluation of the						
		experiment; - interpretation and						
		presentation of results.	-					
		The goal of the discipline is to	5			V	V	
		master the skills of applying						
		modern information systems						
		and technologies to support						
		transport and logistics systems,						
		logistics processes and supply						
	U	chain management. Content:						
	-	information systems and						
4	-	innovative technologies in the						
		management of transport						
	services	systems and flows. Satellite						
		communication and navigation						
		systems, tracking and tracing of						
		cargo and transport flows.						
		RFID systems. BigData,						
		Blockchain and Internet Of						
		Things technologies						
		Cycle of prof						
		<b>Componen</b>	~	v				
		The main trends in the		v				
		development of the ideology of						
		supply chain management. Key factors and drivers that						
	I TODAL TRADAG	determine the development of						
	in clinniv	the DRM concept.						
5	chain	Methodological aspects of						
	management	digital transformation of supply						
	and research	chains. Digital technologies in						
		their supply chains. The best						
		practice of leading companies						
		in the field of logistics and						
		SRM. Issues of segmentation of						
		supply chains, customer-						

6	Methodology for the design of transport and logistics	oriented business, increasing the sustainability, dynamism and transparency of supply chains. The aim of the course is the formation of knowledge and skills for research, design and modeling of transport processes and systems. Course content: Methodological foundations for the design of transport processes and systems. Information support for design. Modeling of transport processes. Methodology and methods for designing cargo supply networks, warehouse systems, transport facilities, transport and technological routes; planning, execution and	5		V	V		
	processes	controlling of resource flows (goods, materials, information, etc.) in complex transport and logistics systems and supply chains; problems of value added management in the production of transport services for the end user; problems of logistic coordination in transport systems. Designing urban / regional road freight transport routes.						
7	Reengineerin g in transport logistics	The purpose of the course is to acquire skills in modernizing the business processes of transport systems. Course content: Theoretical prerequisites for optimizing the transport process in transport systems. Reengineering methodology. Optimization of capacities and indicators of permanent devices of transport systems and their capacity. Improvement of the operational management system for the interaction of various types of transport. Spheres of optimal interaction of various types of	5					

		transport and the development							
		transport and the development of their competitiveness.							
		<b>1</b>	5						
		Purpose: to form a complex of	5		V				
		theoretical knowledge of the							
		basics of system analysis and							
		forecasting of traffic flows and							
		systems. Contents: Systems							
		analysis as a methodology of							
	System	general systems theory. Basic							
<u> </u>	analysis of	principles, tasks and functions							
8	transport	of system analysis and their							
	systems	application in the study of							
	5,5001115	transport systems. Models and							
		methods of system analysis and							
		forecasting of traffic flows;							
		time series and forecasting							
		methods in the research of							
		transport systems.							
		Practice-orie	nted mor	مايية					
			10	auic	v				
		Pedagogical practice is	-		v				
		conducted for the purpose of							
		formation and development of							
		pedagogical skills and							
		competences of the doctoral							
<u> </u>	Pedagogical	student, determining his/her							
9	practice	readiness for pedagogical							
	F	activity. During the pedagogical							
		practice the doctoral student							
		gets acquainted with modern							
		innovative methods and							
		technologies of teaching in							
		lecture and practical classes.							
		Doctoral student's research	10	v				v	v
		practice is conducted for the							
		purpose of studying the latest							
		theoretical, methodological and							
		technological achievements of							
	Research	domestic and foreign science,							
10	practice	as well as consolidation of							
	r	practical skills, application of							
		modern methods of scientific							
		research, processing and							
		interpretation of experimental							
		data in the dissertation research.							
		para in the dissertation research.	l		1				

#### 5. Curriculum of educational program





CURRICULUM am on enrollment for 2023-2024 academic year Educational program 8D11301 - "Transport services" Group of Educational programs D147 - "Transport services"

	Name of disciplines	Cycle	Total amount	Total	Classroom	SIS	Form of	Alloc	ation of fac	e-to-face to	aining bas	ed on cours	es and	
DI			in credits	hours	amount	(including	control				esters			
Discipline					lec/lab/pr	TSIS) in			ourse		2 co	urse		
code						hours		1 semester	2 semester	3 semester		5 semester	6 semeste	
CYCLE	DF BASIC DISCIPLINES (BD)													
			M-1. M	odule of	basic traini	ng (universi	ty compon	ent)						
MET322	Scientific research methods	BD UC	5	150	2/0/1	105	E	5						
NG305	Academic writing	BD UC	5	150	0/0/3	105	Е	5				1000		
					component	of choice		1						
TRA301	Digital technologies of transport and logistics services	BD												
TRA303	Simulation mode ling of transport and logistics systems		5	150	2/1/0	105	Э	5					_	
CYCLE	OF PROFILE DISCIPLINI	ES (PD)										-		
			M-2. Mod	ule of pr	ofessional a	tivity (com	nonent of	hoice)		2000				
TRA302	Reengineering in transport logistics						onent or i							
TRA304	Methodology for the design of transport and logistics systems and processes	PD, CCH	5	150	2/0/1	105	Э	5						
TRA300	System analysis of transport systems	PD, CCH												
LOG300	Global trends in supply chain management and research	PD, CCH	5	150	2/0/1	105	Э	5						
-				M-3	Practice-or	iented modu	ile			_				
	Pedagogical practice	BD UC	10						10		1			
AAP355	Research practice	PD UC	10							10				
			and the second	M-4. E	xperimental	research me	odule							
AAP336	Research work of a doctoral candidate, including internships and completion of a doctoral dissertation	RWDS UC	5					5						
AAP347	Research work of a doctoral candidate, including internships and completion of a doctoral dissertation	RWDS UC	40						20	20				
AAP356	Research work of a doctoral candidate, including internships and completion of a doctoral dissertation	RWDS UC	60								30	30		
AAP348	Research work of a doctoral candidate, including internships and completion of a doctoral dissertation	RWDS UC	18										18	
				M-5.	Module of fi	nal attestati	ion	·		-				
ECA303	Writing and defending a doctoral dissertation	FA	12										12	
	Total based on UNIVERSITY:							30	30	30	30	30	3	

	Number of credit	s for the e	ntire perie	od of study							
	Cycles of disciplines		Credits								
Cycle code				university component (UC)	of choice (CCH)	Total					
BD	Cycle of basic disciplines	-	and the second	20	5	25					
PD	Cycle of professional disciplines			10	10	20					
	Total for theoretical tra	ining:	0	30	15	45					
	RWDS					123					
FA	Final attestation		12			12					
	TO	TAL:	12	30	15	180					

Decision of the Scientific Council of KazNRTU named after K.Satbayev. Protocol No. 3 "24" 10 2022 on of the Educational and Methodological Council of KazNRTU named after K.Satpayev. Protocol Ne  $\frac{2}{2}$  " $\frac{2}{2}$ "  $\frac{10}{20}$   $\frac{2}{2}$ Decision of the Academic Council of the Project Management Institute named after E.A. Turkebayev. Protocol No 3 "17 " 10 2022.

Alla: Project Management Institute Director Representative of the Council from employers

B.B. Amralinova G.S. Mukł 10V2 S.M. Medetbekov

B.A. Zhautikov

Vice-Rector for Academic Affai

Head of "Logistics" Departm