Non-commercial joint-stock company
«Kazakh National Agrarian Research University»

AGREED
Direktor LLP «Технобель»
_____ S.Ramazanov
«_01_» _____ 2024

APPROVED
Chairman of the Board – Rector
_____ A.Kurishbaev
«___» _____ 2024

EDUCATIONAL PROGRAM

7M11301 – «Organization of transport, traffic and transport operation»

Awarded degree: Master of Engineering under the educational programme
7M11301 – «Organization of transport, traffic and transport operation»
(scientific-pedagogical direction)

ALMATY 2024

Approved at the meeting of the Department «Machine use» named after I.V. Sakharov
Protocol № 6 «15» 01 2024
Head of the department _____ M.Zhetpeisov

Considered at meetings Academic committee of the Faculty of «Engineering - technical»
Protocol № 6 « 16 » 01 2024
Chairman of the AC of the faculty _____ U. Ibishev

Reviewed by the Educational Methodological Council of the University and recommended to the Academic Council
Protocol № 4 « 01 » 02 2024

Chairman of the EMS of the University _____ A. Abdyrov

The educational program was approved at the meeting of the Academic Council of KazNARU
Protocol № 9 , « 01 » 03 2024

Developers:

Dean of the Faculty		L. Aldibaeva
Head of department		M. Zhetpeisov
Professor		K. Khazimov
Master student		G. Erlan
Graduate of 2023		A. Kenesbekova

Employers:

Employer: Direktor LLP «Технобел»		S.Ramazanov

Agreed:

Head of the Educational Program Design Office		Zh. Kussainova

Application area

Designed for the implementation of the training of master students in the educational program 7M11301 – «Organization of transport, traffic and transport operation» in the NJSC «Kazakh National Agrarian Research University»

Regulatory documents

Law of the Republic of Kazakhstan On Education Astana, Akorda, July 27, 2007., No. 319-III ZRK (with changes and additions as of 01/01/2019)

State obligatory standard of higher and postgraduate education. Approved by the Resolution of the Government of the Republic of Kazakhstan dated October 31, 2018., No. 604

Classifier of areas of training with higher and postgraduate education No. 569 13.10.2018;

Model Rules for the Activities of Educational Organizations Implementing Educational Programs of Higher and (or) Postgraduate Education, MES RK of October 30, 2018., No. 595.

Rules of the organization of the educational process on the credit technology of education. Order of the Ministry of Education and Science of the Republic of Kazakhstan dated October 12, 2018., No. 563

Professional standard «Control over the technical condition of road transport» Appendix No.3 to the order No. 239 of the Deputy of the Board of the National Chamber of Entrepreneur of the Republic of Kazakhstan «Atameken» September 6, 2018.

Professional standard "Forwarding services in road transport" Appendix No. 76 to the order of the Acting Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" dated 01.09.2023 № 136.

Professional standard "Preparatory and final operations related to the operation of buses" Appendix No. 18 to the order of the Acting Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" dated 01.09.2023 № 136.

Professional standard "Diagnostics, maintenance and repair of other motor vehicles" Appendix No. 9 to the order of the Acting Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" dated 01.09.2023 № 136.

Website NCE Atameken https://atameken.kz/

1. Passport of the educational program
7M11301 – «Organization of transport, traffic and transport operation»

Education area code and classification	7M11 – Services
Code and classification of training areas	7M112 – Transport service
Code and name of the educational program	7M11301 – Organization of transport, traffic and transport operation
Type of educational program	Current, New, Innovative
The purpose of the educational program	Training of scientific and pedagogical personnel and competitive specialists in transport services
A-level ISCE	7
A-level NFQ	7
A-level IQF	7
Number of the application to the license in the direction of training	KZ42LAA00006720 March 27, 2019
Accreditation of EP The name of the accreditation body The period of validity of accreditation	SA certificate No. 0096/2 HKAOKO 12.12.2016- 10.12.2021
Degree awarded	Master of science/ master in the area of services in education program
Learning outcome	Table 2
List of qualifications and positions	The graduate can carry out professional activities in the following areas: - mechanical engineer for the operation of transport equipment; - designer in research institutes for the organization of street networks; - engineer for freight forwarding service; - teacher on organization of transportation, traffic and operation of transport; - researcher in research organizations; - specialist in state bodies of management and inspection of transport and transport equipment.
Field of professional activity	Educational institutions, including universities, research organizations, all branches of industry, agro-industrial complex, logistics companies of the transportation process, taking into account the restructuring of the transport management system.
Sphere and object of professional activity	- research institutes and educational organizations of any profile; - production enterprises of all industries; - enterprises and divisions of transport; - regional bodies of transport management and state transport inspection; - transport-forwarding enterprises and organizations; - enterprises of agro-industrial complex.
Functions of professional activity	Educational program 7M11301 – Organization of transport, traffic and transport operation includes two educational trajectories: 1. «Organization of transportation, traffic and operation of transport».

	2. «Traffic management». Professional activity of the master is directed: - for businesses and organizations of all sectors, industry and transport, road traffic complex, the military-industrial complex, industry, agriculture and utilities, production; - state bodies in the field of transport and communication, organizations of higher and special education, design and survey institutes, bureaus, firms, etc. of various forms of ownership; - graduates of the scientific and pedagogical magistracy can carry out activities to the corresponding graduate of the profile magistracy; - undergraduates can conduct pedagogical activities in educational institutions.
Types of professional activity	Masters of the direction of training 7M113 - "Transport services" can perform the following types of professional activity: **1. Project-technological:** - measurement and evaluation of production and non-production costs for road safety; - calculation and evaluation of production and non-production costs for the development of transport and technological systems of cargo delivery; - comprehensive assessment of the effectiveness of road traffic management systems; - calculation and development of methods and means to reduce traffic accidents on the street and road networks. **2. Organizational and management:** - development and implementation of technological regulations aimed at the design features of the developed and used transport and technological systems; - selection and professional training of personnel of industrial enterprises; - calculation of the number of personnel services, specifications and other guidance documents for the development and execution of technical documentation. **3. Research:** - research activities, solutions of standard scientific problems; - the use of modern information technologies in the educational process; - conducting research work to develop methods and tools to improve road safety; - research and development of activities for the development and application of ideas in the context of scientific research. **4. Scientific-pedagogical:** - study of modern methods of teaching disciplines of

	traffic management; - development of scientifically-based methods of professional development of employees at all levels; - the use of innovative teaching technologies in the process of pedagogical activity.
To be competent	- in the field of research methodology; - in matters of innovative technical and technological production in all industries, including agriculture; - in the field of scientific and scientific-pedagogical activity in educational institutions; - in the implementation of scientific projects and research in the professional field.

2. Results of training on EP

Codes	Learning outcomes
LO1	The ability to demonstrate a broad outlook in matters of philosophy of science, psychology and pedagogy, to use modern methods of teaching electrical engineering disciplines and occupational safety, to find optimal options in various psychological situations and make managerial decisions.
LO2	The ability to conduct a professional conversation in an international environment in English, the ability to maintain a conversation on a wide range of scientific, technical and pedagogical issues
LO3	Knowledge of modern directions of research activity in the field of organization of improvement of competitiveness of transport services
LO4	The ability to realize the capabilities of modern technology of transport processes, improve the competitiveness of transport services; reduce its cost; increase the speed of cargo delivery; reduce the time spent on loading and unloading cargo, etc.
LO5	The ability to demonstrate leadership qualities in the organization and conduct of scientific research, the ability to demonstrate business qualities in modeling business decisions, the ability to effectively manage business activities
LO6	The ability to realize knowledge about laws, principles, concepts, terminology, content, specific features of the organization and management of scientific research, when performing transport operations.
LO7	Ability to organize and lead the work of a small team of scientific and engineering workers, readiness for leadership and ensuring a normal psychological climate
LO8	The ability to implement theoretical and methodological foundations for improving the organization of the use of various types of transport in agriculture, taking into account the peculiarities of performing many transport and technological operations by machine-tractor units.
LO9	The ability to organize monitoring in transport systems, analyze their results, develop measures to improve the efficiency of equipment and control systems, the ability to develop effective scientific and engineering measures to solve problems in transport systems.
LO10	Ability to analyze and select technical means for agricultural work, design pipeline routes and evaluate the quality of completed pipeline works.

3. Content of the educational program
7M11301 - Organization of transport, traffic and transport operation (2 year)

№	HSC/OC	Module names	Code of discipline	The name of the discipline forming the competence	Total in academic credits	Volume in hours							Distribution of credits by courses and semesters				Department [1]	Form of control
						Total academic hours	Classroom				Extracurricular		1 course		2 course			
							Lectures	Practical class	Laboratory research	Other (practice)	Independent work of a master student with a teacher	Independent work of a graduate student	1	2	3	4		
1	**TT**		**Theoretical training**		**88**	**2640**	**225**	**525**	**0**	**190**	**375**	**1325**						
CBD: UC/OC			**Cycle of basic disciplines: University component / Optional Component**		**35**	**1050**	**96**	**224**	**0**	**90**	**160**	**480**						
1.1	**CBD**		**Cycle of basic disciplines**															
1)	**UC**		**University component**		**20**	**600**	**51**	**119**	**0**	**90**	**85**	**255**						
including:																		
1.1.1	**UC**	**Module 1. Scientific communication and process organization**	HPS 60201	History and philosophy of science	**4**	120	12	28	0	0	20	60	4				22	exam
1.1.2	**UC**		FL 60202	Foreign language (professional)	**4**	120	12	28	0	0	20	60	4				24	exam
1.1.3	**UC**		HSP 60203	Higher School Pedagogy	**5**	150	15	35	-	-	25	75	5				10	exam
1.1.4	**UC**		PM60204	Psychology of management	**4**	120	12	28	0	0	20	60		4			10	exam
1.1.5	**UC**		TP	Teaching practice	**3**	90				90				3				repor

			600200														t
2)	**OC**		**Optional component**		**15**	**450**	**45**	**105**	**0**	**0**	**75**	**225**					
Educational program№1 «Organization of transport and transport operation»																	
1.1.6	**OC**	**Module 2. Scientific research and modern transportation**	MTTO 60205	Modern technologies of transport organization	**5**	150	15	35	-	-	25	75	5			8	exam
1.1.7	**OC**		FSR 60206	Foundations of scientific researches	**5**	150	15	35	-	-	25	75	5			8	exam
1.1.8	**OC**		TM 60207	Transport management	**5**	150	15	35	-	-	25	75	5			8	exam
Educational program№2 «Traffic management»																	
1.1.9	**OC**	**Module 3. Research of the transport management system**	TMS 60205	Transport management systems	**5**	150	15	35	-	-	25	75	5			8	exam
1.1.10	**OC**		SR 60206	Scientific researches	**5**	150	15	35	-	-	25	75	5			8	exam
1.1.11	**OC**		TOT 60207	Technologies in the organization of transportation	**5**	150	15	35	-	-	25	75	5			8	exam
CSD: UC/OC			**Cycle of specialized disciplines: University component**														
1.2	**CSD**		**Cycle of specialized disciplines**		**53**	**1590**	**129**	**301**	**0**	**100**	**215**	**845**					
1)	**UC**		**Optional component**		**20**	**600**	**60**	**140**	**0**	**0**	**100**	**300**					
1.2.1	**UC**	**Module 4. Management problems in the organization of scientific communications and**	BA 60301	Business administration	**7**	210	21	49	0	0	35	105		7		18	exam
1.2.2	**UC**		MNGMU 60302	Methodology of scientific research in transport services	**5**	150	15	35	0	0	25	75		5		8	exam
1.2.3	**UC**		MBS 70301	Modeling of business solutions	**4**	120	12	28	0	0	20	60			4	18	exam
1.2.4	**UC**		Con 70302	Конфликтология	**4**	120	12	28	0	0	20	60			4	10	exam

2)	**OC**		**Optional component**		**23**	**690**	**69**	**161**	**0**	**0**	**115**	**345**						
Educational program№1 «Organization of transport and transport operation»																		
1.2.5	**OC**	**Module 5. Theory of operation of agricultural and pipeline transport**	TOAV 70303	Theory of operation of agricultural vehicles	**6**	180	18	42	-	-	30	90		6			8	exam
1.2.6	**OC**		ICPFTPT 70304	Installation and connection of pipelines from thermoplastics (polyethylene) in pipeline transport	**6**	180	18	42	-	-	30	90			6		8	exam
1.2.7	**OC**	**Module 6. Transportation operations research and forecasting of transport**	TOR 70305	Transportation operations research	**5**	150	15	35	-	-	25	75			5		8	exam
1.2.8	**OC**		FTDATCATS 60303	Forecasting the development and evaluation of the competitiveness of transport systems	**6**	180	18	42	-	-	30	90			6		8	exam
Educational program№2 «Traffic management»																		
1.2.9	**OC**	**Module 7. Theory of cargo traffic and modeling of**	TCT 70303	Theory of cargo traffic	**6**	180	18	42	-	-	30	90		6			8	exam
1.2. 10	**OC**		MTS 70304	Modeling of technical systems	**6**	180	18	42	-	-	30	90			6		8	exam
1.2. 11	**OC**	**Module 8 Logistics systems and experimental research**	ITLS 70305	International Transportation logistics systems	**5**	150	15	35	-	-	25	75			5		8	exam
1.2. 12	**OC**		MSERPED 60303	Methods of scientific experimental research and processing of experimental data	**6**	180	18	42	-	-	30	90			6		8	exam

3)			RP 60300	Research practice	**10**	**300**				**100**		**200**		3	3	4	8	report
2	RWMS		RWMS 603001	Research work of a master's student, including internship and completion of a master's thesis	**24**	**720**				**120**		600	2	2	2	18		report
3	ATT		Additional types of training															
	FC		Final certification		**8**	**240**				**90**		150				8		
			Preparation and defense of the master's thesis		**8**	240				90		150				8		
TOTAL:					**120**	**3600**	**225**	**525**	**0**	**400**	**375**	**2225**	**30**	**30**	**30**	**30**		

Appendix to information about items

Competence of scientific and pedagogical magistracy directions
7M11301 – «Organization of transport, traffic and transport operation»

Description of competence, rus.	Type competence	№ competences
Knowledge of the history and philosophy of science development	CC	1
Ability to conduct a reasoned conversation on a wide range of scientific issues	CC	2
Ability to demonstrate broad-mindedness in matters of philosophy of science, psychology and pedagogy	CC	3
Ability to conduct a professional conversation in an international environment in English	CC	4
Be able to form and transform information flows during the formation of stages of transportation organization and operation of transport as a science	CC	5
Formation of students ' ability to work according to modern teaching methods	CC	6
The ability of undergraduates to use special computer products, quickly master modern computer programs.	CC	7
Ability to apply mathematical methods in professional activity in unity with information technologies	CC	8
Knowledge of techniques and methods for planning an experiment to establish reliable values	CC	9
Ability to use instrumental techniques, methods of planning and conducting scientific research	CC	10
Knowledge of the basics of scientific research, management of scientific projects, business solutions	CC	11
Ability to control the psychological climate in the production team	CC	12
Ability to select personnel based on professional suitability	CC	13
Ability to set and solve research tasks in the field of transport services	CC	14
Ability to work with scientific and special literature in search of solutions to scientific problems of transport services	CC	15
Capacity for professional growth and professional mobility	CC	16

4. Competence map of modules

Basic competencies	Learning outcomes
Module 1. **Scientific communication and organization of the learning process in higher education.** - Knowledge of the history and philosophy of the development of science - The ability to conduct a professional conversation in an international environment in English - Ability to conduct a reasoned conversation on a wide range of scientific issues - Ability to demonstrate broad-mindedness in matters of philosophy of science, psychology and pedagogy	- The ability to demonstrate a broad outlook in matters of philosophy of science, psychology and pedagogy, to use modern methods of teaching electrical engineering disciplines and occupational safety, to find optimal options in various psychological situations and make managerial decisions (LO1). - The ability to conduct a professional conversation in an international environment in English, the ability to maintain a conversation on a wide range of scientific, technical and pedagogical issues (LO2).
Module 2. **Scientific research and modern transportation technologies.** - The ability to independently organize and conduct scientific research in the design, production and operation of transport. - Ability to use modern technologies of transportation and management of operational work on transport.	- Knowledge of modern directions of research activities in the field of improving the competitiveness of transport services (LO3). - The ability to realize the capabilities of modern technology of transport processes, improve the competitiveness of transport services; reduce its cost; increase the speed of cargo delivery; reduce the time spent on loading and unloading cargo, etc. (LO4).
Module 3 **Research of the transport management system.** - The ability to improve the management system of the transportation process in conditions of increasing traffic volume - Know the maintenance of the transportation process, taking into account the effective use of vehicles based on the analysis of the activities of transport facilities	- The ability to demonstrate leadership qualities in the organization and conduct of scientific research, the ability to demonstrate business qualities in modeling business decisions, the ability to effectively manage entrepreneurial activity (LO5). - The ability to realize knowledge about laws, principles, concepts, terminology, content, specific features of the organization and management of scientific research, when performing transport operations (LO6).
Professional competencies	**Learning outcomes**
Module 4. **Scientific communication and management problems in the organization of transportation.** - Ability to control the psychological climate in the production team - The ability to select personnel according to professional suitability - Ability to analyze and find solutions to problems in transport - The ability to find and evaluate new market opportunities and justify business ideas. - The ability to make the right management decisions in business;	- The ability to organize and lead the work of a small team of scientific and engineering workers, readiness for leadership and ensuring a normal psychological climate (LO7). - The ability to implement theoretical and methodological foundations for improving the organization of the use of various types of transport in agriculture, taking into account the peculiarities of performing many transport and technological operations by machine-tractor units (LO8). - The ability to organize monitoring in transport systems, analyze their results, develop measures to improve the efficiency of equipment and control systems, the ability to develop effective scientific and engineering measures to solve problems in transport systems (LO9).

Module 5. **Theory of operation of agricultural and pipeline transport.** - The ability to make an informed choice of modern technical means (rolling stock) used for the transportation of goods and people in agriculture, as well as the ability to make technical decisions for the rational use of various agricultural installations. - The value of thermoplastics pipelines, advantages and disadvantages. Types and brands of thermoplastics pipelines.	- The ability to analyze and select technical means for agricultural work, to design pipeline routes and to evaluate the quality of work performed on the pipeline (LO10).
Module 6 . **Transportation operations research and forecasting of transport systems.** - Ability to forecast transport systems and transportation operations.	- Ability to research and design mathematical modeling of transportation operations, develop methodological foundations for forecasting transport systems (LO10).
Module 7. **Theory of cargo traffic and modeling of technical systems.** - The ability to design, as well as develop the most effective schemes for organizing the movement of vehicles.	- Ability to model the work of technical systems, analysis of cargo and commercial flows, in matters of environmental safety in transport. To use the capabilities of modern information and computer technologies in the management of transportation in real time (LO10).
Module 8. **Logistics systems and experimental research methodology.** - The ability to deliver goods and products to a given place, in the right quantity and assortment, prepared as much as possible for production or personal consumption at a given cost level (implementation of the logistics mix). - To know the methods of organizing theoretical and experimental research in transport, to develop a research methodology, processing the results obtained.	- Ability to substantiate the concept of logistics organization of local transport systems, modern international legal support of transportation and the procedure for processing both transport and customs documentation (LO10). - Ability to use experimental research methods and experimental data processing (LO 10).

5. Summary table reflecting the volume of loans disbursed in the context of the educational program

Training course	Semester	Number of subjects studied				Number of credits					Total	Total in hours	Quantity	
		CBD		CPD		Theoretical training	Pedagogical practice	Research practice	RWMS	Final certification			Exam	Report
		UC	OC	UC	OC									
I	**1**	3	3			**28**			2		30	900	6	
	2	1		2	1	**22**	3	3	2		30	900	4	3
II	**3**			2	3	**25**		3	2		30	900	5	2
	4							4	18	8	30	900		2
Total		**4**	**3**	**4**	**4**	**75**	**3**	**10**	**24**	**8**	**120**	**3600**	**15**	**7**

Annex 2.2

Information about disciplines

№	Name of the discipline	Brief description of the discipline (30-50 words)	Number of credits	Semester	Emerging competencies (codes)
1	**Theoretical training**		**88**		
	Cycle of basic disciplines University component / component of choice				
1.1	**Cycle of basic disciplines (CBD)**		**35**		
1)	**University component (VC DB):**		**20**		
	including:				
1.1.1	History and philosophy of science	The course "History and Philosophy of Science" is mandatory for all Master's degree majors. It forms a culture of scientific thinking among undergraduates, develops analytical abilities and research skills, provides theoretical and practical knowledge necessary for a future scientist. The study of the discipline is important in an era of increasing urgent need for science and scientists. "History and Philosophy of Science" introduces the phenomenon of science as a subject of special philosophical analysis, forms knowledge about the history and theory of science; about the laws of the development of science and the structure of scientific knowledge; about science as a profession and a social institution; about methods of conducting scientific research; about the role of science in the development of society.	4	1	Competencies: - in nature, structure, principles of organization and functioning of science; - in the production of knowledge, patterns of formation and development of scientific disciplines; - - in the formulation and solution of problems arising in the course of research activities; - in the application of methodological and methodical knowledge, conducting scientific research, pedagogical and educational work. - - in writing scientific articles, abstracts, speeches at conferences, symposiums.
1.1.2	Foreign language (professional)	The main objective of the discipline is the systematic deepening of communicative competence within the framework of international standards of foreign language education on the basis of further development of skills and abilities of active English language proficiency in the professional activity of the future Master of Sciences. The development of undergraduate skills: -	4	1	Competencies: - work with lexicographic sources in a foreign language (traditional and on-line).

		reading literature in English in the specialty for receiving and transmitting scientific information; - registration of extracted information in the form of translations, annotations, abstracts; - conducting conversations in English on topics related to the specialty and scientific work of the undergraduate.			
1.1.3	Higher school pedagogy	The course examines pedagogical science and its place in the system of human sciences, the modern paradigm of education, the system of higher education in Kazakhstan, the upbringing and formation of the personality of a specialist, management in education. An idea of the methodology of pedagogical science, methods and forms of teaching is given. Promotes the disclosure of professional and communicative competence of the teacher. Forms knowledge about the theory of learning, the content of education, the organization of the learning process, the organization of SRS, ideas about new educational technologies, technologies for compiling teaching materials. Develops ideas about the theory of scientific activity, research and development.	5	1	Competencies: - the ability to disclose the professional and communicative competence of the teacher. - forms knowledge about the theory of learning and the content of education
1.1.4	Management Psychology	The discipline examines the subject, essence, tasks and structure of management psychology, methods of psychological research and the main approaches to its research. Examines the psychology of the subject of managerial activity, the psychology of cognitive activity, perceptual, mnemic, thought processes in managerial activity. The course forms ideas about etiquette in the activities of a modern business person, the communicative competence of a manager, emotional and volitional states in management activities and the ability to manage.	4	2	Competencies: - formation of students' needs for knowledge and skills of a managerial nature and professionally significant qualities of future specialists; - formation of students' understanding of the basics of management; - development of independence in the search for information; - using methods of personality research; - practical use of the acquired psychological knowledge in various management situations.
1.1.5	Pedagogical		3	2	

	practice				
2)	**Component of choice (CC)**		**15***		
No. 1 educational trajectory "Organization of transportation and operation of transport"					
1.1.6	Modern technologies in the organization of transportation by transport	In this discipline, modern technologies in the organization of transportation, scientific research of the development of systems for the organization of traffic and operation of transport are considered. As a result of mastering the discipline, a master's student gains knowledge and understanding of computer methods and technology for analyzing data interpretation.	5	1	Competencies: - in matters of theory and practice of the development of the transportation management process, general principles of management of the operational work of transport, based on the use of advanced technology and technology.
1.1.7	Fundamentals of scientific research	This discipline examines the current state of scientific and technological progress. Development of scientific foundations for the formation of engineering solutions in the design, production and operation of transport. Erasing the distinction between designers and researchers. The application of the acquired knowledge will allow undergraduates to conduct scientific research, take into account the specifics of specific production conditions and identify reserves for improving its efficiency.	5	1	Competencies: in the modeling of works on highways, analysis of freight and commercial flows, in international transportation, in urban transport planning, environmental safety in transport, technology and mechanization of loading and unloading operations, organization of road traffic.
1.1.8	Transport management	Transport management the processes of physical movement of goods on the way from the producer to consumers through the formed logistic distribution channels are considered. It consists in a consistent decision of the choice of the mode of transport and the determination of places and methods of transshipment of goods from one mode of transport to another.	5	1	Competencies: issues of formation of logistics distribution channels in the sequential decision of the choice of the mode of transport and determination of places and methods of transshipment of goods from one mode of transport to another.

No. 2 educational trajectory "Organization of traffic"					
1.1.9	Transport management systems	In this discipline "Transport management systems", the issues of organization and development of the transportation management system (domestic and foreign experience) and methodological foundations of transport management systems are considered. The application of the acquired knowledge and skills will allow undergraduates to improve the management systems of the transportation process in conditions of increasing traffic volume.	5	1	Competencies: - in the maintenance of the transportation process, taking into account the effective use of vehicles based on the analysis of the activities of transport facilities.
1.1.10	Scientific research	Studies the current state of scientific and technological progress is determined by the development of scientific foundations for the formation of engineering solutions in the design, production and operation of transport. The ability to conduct scientific research becomes a necessity for a specialist, since it is often only with their help that it is possible to take into account the specifics of specific production conditions and identify reserves for increasing its efficiency.	5	1	Competencies: - ability to conduct scientific research; - know the specific conditions of production and identify reserves to increase its efficiency.
1.1.11	Technologies in the organization of transportation	The discipline examines the technological foundations of the rational organization of the transport process, which includes issues of planning and management of transport, organization of traffic and technical operation, organization and mechanization of cargo operations, commercial operation, technology of cargo transportation by transport.	5	1	Competencies: - in matters of planning and management of transport, organization of traffic and technical operation, organization and mechanization of cargo operations.
	Cycle of profiling disciplines University component / component of choice				
1.2	**Cycle of profile disciplines (CPD)**		**53**		
1)	**University component (VC PD):**		**20**		
1.2.1	Project management in the field of entrepreneurship	The history of the development of project management methods; methodological approaches to decision-making on the development of the project concept, its structuring and evaluation; mastering the role and functions of the project manager at various stages of the project life cycle; introduces organizational forms of project management and methods of their development and optimization Tools for planning and monitoring the progress of the project; acquisition and development of research and creative	7	2	Competencies: - understand the social significance of entrepreneurial activity, make managerial decisions and be responsible for them; - application of innovative technologies in business, search

		work, economic modeling of projects using software tools.			and processing of information necessary for solving professional tasks; - planning and implementation of entrepreneurial thinking based on professional and personal development; - the ability to independently acquire new knowledge using modern information technologies.
1.2.2	Methodology of scientific research in transport services	Introduction to the methodology of experimental research planning, preparation and conduct of experiments. Tasks of processing experimental data, finding functional connections, analyzing experimental data, expressing experimental patterns with formulas, establishing the degree of mutual connection between phenomena, other methods of processing experimental data.	5	2	Competencies: - in matters of research in bibliographic research; in dissertation research, in the formation of the topic of the dissertation work; - identify contradictions and substantiate the relevance of the research problem.
1.2.3	Modeling of business solutions	Familiarization with the decision-making process, starting from the formalization of the initial problem, through the construction and solution of a mathematical model on a computer to the analysis of the solution and the formation of a management decision. Formation of skills for constructing and solving mathematical models and analyzing these solutions on a computer. Consideration of production, transport and financial models of tasks for the selection of management solutions.	4	3	Competencies: - analysis of the technological system using modern methods of mathematical modeling, independent organization and conduct of scientific research.
1.2.4	Conflictology	Examines the main categories of conflictology, typology of conflicts, conflict management technologies. Theory of personality behavior in conflict, technologies of effective communication and rational behavior in conflict. Forms an idea of the psychology of the negotiation process on conflict resolution, mediation as a technology of conflict regulation. Conflicts in society, conflicts in organizations, conflicts and stress.	4	3	Competencies: - forms an idea of the psychology of the negotiation process for conflict resolution.

2)	**Component of choice (CC)**		**23***		
No. 1 educational trajectory "Organization of transportation and operation of transport"					
1.2.5	Theory of agricultural transport operation	The discipline "Theory of agricultural transport" studies the technical means (rolling stock) used to transport goods and people in agriculture. Rolling stock – automobile, tractor and horse-drawn. Bodywork devices and other features that determine the possibilities of use.	6	2	Competencies: - in matters of transportation of agricultural goods and analysis of cargo, agricultural work, planning of transport processes, technology and mechanization of loading and unloading of agricultural products.
1.2.6	Installation and connection of thermoplastics (polyethylene) pipelines in pipeline transport	The discipline is aimed at the acquisition by future specialists of theoretical knowledge on modern methods of installation and connection of polymer pipelines, as well as practical skills in connection of polymer pipelines made of thermoplastics, through the use of modern technical means for control and welding of polymer materials.	6	3	Competencies: - understand the issues of pipelines made of thermoplastics; -know the types and brands of thermoplastics pipelines.
1.2.7	Transportation operations research	This discipline studies the basics of mathematical modeling and decision theory. Linear models of operations research. Game theory. Queue theory. Queuing theory. Theory of inventory management (resources). Theory of schedules.	5	3	Competencies: - in matters of planning and management of transport, organization of traffic and technical operation, organization and mechanization of cargo operations.
1.2.8	Forecasting the development and evaluation of the competitiveness of transport systems	In this discipline, the content, structure, and forecasting of transport projects are considered. Requirements for the analysis of transport projects and technologies. The essence of the analysis. Features of using system analysis.	6	3	Competencies: - analyze transport projects and technologies. The essence of the analysis.
No. 2 educational trajectory "Organization of traffic"					
1.2.9	Theory of traffic flow	This discipline examines the classification of transport systems, their hierarchical position and features of the functioning of lower-level systems; the functioning of individual vehicles and higher-	6	2	Competencies: - in the analysis of information, technical data, indicators and

		level systems. As a result of mastering the discipline, a master's student receives knowledge of the laws of the transport process in all systems peculiar to road transport.			results of transport systems; to use the capabilities of modern information and computer technologies in the management of transportation in real time, as well as to develop the most effective schemes for organizing the movement of vehicles.
1.2.10	Modeling of technical systems	In this discipline, the adequacy, adaptability and informativeness of the model are considered. The adequacy of the model, complete inconsistency and compliance. Aspects of checking the adequacy of the model: consistent and obey all the usual laws of logic; the ability to adequately describe the initial situation. The main characteristic features of modeling. The process of identifying the main or essential features of the phenomenon. The process of schematization or idealization.	6	3	Competencies: - in matters of the main characteristic features of modeling and the process of identifying the main or essential features of the phenomenon.
1.2.11	Logistics systems of international transportation	In this discipline, the concepts of logistics organization and planning of technological processes of transport systems are considered; justification of rational technological processes of local transport systems; legal and commercial support of international transportation; transportation as part of international transport corridors; organization of customs clearance and control of goods and vehicles.	5	3	Competencies: in matters of substantiation of the concept of logistics organization of local transport systems, modern international legal support of transportation and the procedure for registration of both transport and customs documentation.
12.12	Methodology of scientific experimental research and experimental data processing	In this discipline, the methodology of experiments is considered; planning, preparation and conduct of experiments; tasks of processing experimental data; finding functional relationships; analysis of experimental data; expression of experimental patterns by formulas; establishing the degree of mutual connection between phenomena; other methods of processing experimental data.	6	3	Competencies: - in matters of research methodology; - identify contradictions and substantiate the relevance of the research problem.
3)	Research practice	Research practice is conducted in order to consolidate the theoretical knowledge gained in the learning process, acquire	10	2, 3, 4	Competencies: - the ability to independently

		practical skills, competencies and professional experience.			improve the level of professional knowledge and use the acquired knowledge and skills in practice, implementing special means and methods of obtaining new knowledge; - the ability to put into practice innovative methods of designing machinery and equipment.
2	Research work of a master's student, including internship and completion of a master's thesis	Familiarization with innovative technologies and new types of production in the relevant industries or organizations of the field of activity.	24	1, 2, 3, 4	Competencies: - ability to make organizational and managerial decisions in the design of machinery and equipment; - ability to develop technical drawings.
4	**Final certification (FC)**	The purpose of the final certification is to assess the achieved learning outcomes and mastered competencies upon completion of the Master's degree program.	8	4	Competencies: - the ability to think logically, analyze, synthesize, compare, summarize information for its systematization and forecasting; - the ability to determine the range of tasks within the set goal and choose the best ways to solve them, based on existing legal norms, available resources and limitations.
	total:		**120**		

Bases of practice

№	The name of the companies, enterprises, organizations	Contacts Tel, e-mail
1	ТОО «HIGER QUAZAR»	87022629219 info@higerquazar.kz
2	«Вагонсервис» АК	2961385
3	ГУ «Отдел пассажирского транспорта и автомобильных дорог Талгарского района»	87277420928 Talgar_dor2013@mail.ru
4	АЩ «КТЖ Грузовые перевозки Мангистауское отделение ГП»	8(7292)466585
5	Управление Местной Полицейской Службы Департамент Полиции	87232776005
6	ТОО «ГРУПП Четыре»	8(727)2585055 Reception@grp4.kz
7	ТОО «BUS»	8(7252)770662
8	ТОО «ABT& E-trans»	8(727)3905000 abt@abttrans.kz