Joint Stock Company "ALT University named after Mukhametzhan Tynyshpaev"

APPROVE
US ALT decision dated
"27" 03 2025 (Protocol №8)
President-Rector
Zharmagambetova M.S.

EDUCATIONAL PROGRAM

Name: "7M07351 Transport Construction Management (profile)"

Degree level: Master's degree

Code and classification of training areas: 7M073 Architecture and Construction

Code and group of educational programs: M126 – Transport construction

Date of registration in the Register: 30.06.2025

Registration number: 7M07300189

ALMATY, 2025

Content

1. INFORMATION ABOUT THE REVIEW, AGREEMENT, AND APPROVAL OF THE PROGRAM, ITS DEVELOPERS, EXPERTS, AND REVIEWERS

1. INFORMATION ABOUT CONSIDERATION, APPROVAL AND APPROVAL OF THE PROGRAM, DEVELOPERS, EXPERTS AND REVIEWERS

1 DEVELOPED:		
Associate Professor *(job title)*	_____ *(signature)*	Espaeva G.A. *(FULL NAME)*
Apple Build Project LLP *ch.engineer_* *(job title)*	_____ *(signature)*	Kurmanbekov J.K. *(FULL NAME)*
Associate Professor ALT *(job title)*	_____ *(signature)*	Uteshbaeva A.A. *(FULL NAME)*
Head of the Department of "ASI" (job title)	_____ (signature)	Kulmanov K.S. (FULL NAME)
Associate Professor ALT *(job title)*	_____ *(signature)*	Dyusengalieva T.M. *(FULL NAME)*
2 EXPERTS:		
Saulet-SKB LLP, Direktor *(job title)*	_____ *(signature)*	Oshanov A.E. *(FULL NAME)*
«Kazakh Promtransportproject» *LLP ch.engineer_* *(job title)*	_____ *(signature)*	Musaev M.T. *(FULL NAME)*
3 REVIEWER:		
Associate professor of "TSiU" *KazADI named after* *L.Goncharov* *(job title)*	_____ *(signature)*	*Abiev B.A.* *(FULL NAME)*
4 REVIEWED AND RECOMMENDED:		
AC meeting (department) «ASI» *Protocol №7, «18» 02.2025г*	_____ *(signature)*	Kulmanov K.S *(FULL NAME)*
UMB meeting «TaC» *Protocol №8, «17»03.2025г*	_____ *(signature)*	Abdreshov SH.A. *(FULL NAME)*
EMC meeting *Protocol №4, «20»03.2025г*	_____ *(signature)*	Kojabergenova A.K. *(FULL NAME)*

5 **APPROVED** by the decision of the Academic Council dated «__27__» _03___2025г. №8

6 **UPDATED**

2. REGULATORY REFERENCES

1. The educational program has been developed on the basis of the following normative legal acts and professional standards:

2. The Law of the Republic of Kazakhstan "On Education" dated July 27, 2007 No. 319-III (with amendments and additions as of March 27, 2023).

3. The National Qualifications Framework, approved by the protocol of March 16, 2016 of the Republican Tripartite Commission on Social Partnership and Regulation of Social and Labor Relations.

4. The sectoral qualifications Framework for Education, approved by the Minutes of the meeting of the Sectoral Commission of the Ministry of Education and Science of the Republic of Kazakhstan on social Partnership and Regulation of social and labor relations in the field of education and science dated November 27, 2019 No. 3.

5.The State Mandatory Standard of Higher Education (Order No. 66 of the Minister of Science and Higher Education of the Republic of Kazakhstan dated February 20, 2023).

6. Qualification directory of positions of managers, specialists and other employees, approved by the Order of the Minister of Labor and Social Protection of the Population of the Republic of Kazakhstan dated August 12, 2022 No. 309.

7. Rules for the organization of the educational process on credit technology of education in organizations of higher and (or) postgraduate education, approved by the Order of the Minister of the Ministry of Education and Science of the Republic of Kazakhstan No. 152 dated 04/20/2011. (with additions and amendments dated April 04, 2023 No. 145).

8. Classifier of training areas with higher and postgraduate education, approved by Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 13, 2018 No. 569 (with amendments and additions as of June 05, 2020).

9. Algorithm for the inclusion and exclusion of educational programs in the Register of Educational Programs of Higher and Postgraduate Education, approved by Order of the Minister of Education and Science of the Republic of Kazakhstan dated December 4, 2018 No. 665 (with additions and amendments as of December 23, 2020 No. 536).

10. RI-ALT-33 "Regulation on the procedure for development educational programs of higher and postgraduate education".

3. EDUCATIONAL PROGRAM PASSPORT

№	Field name	Note
1	Registration number	7M07100472
2	Code and classification of the field of education	7M07 Engineering, Manufacturing, and Construction Industries
3	Code and classification of the field of study	7M073 Architecture and Construction
4	Code and group of educational programs	B126 – Transport Construction
5	Name of the educational program	7M07351 Transport Construction Management (Specialized)
6	Type of the educational program	New
7	Purpose of the educational program	The purpose of the educational program is to provide students with comprehensive knowledge and practical skills in the management, organization, planning, control, and coordination of processes related to the construction and operation of transport infrastructure facilities.
8	Level according to ISCED	7
9	Level according to NRC	7
10	Level according to ORC	No
11	Distinctive features of the educational program	Note
	Partner university (SOP)	
	Partner university (DDOP)	
12	Form of study	Online, offline
13	Language of study	Kazakh, Russian, English
14	Number of credits	60
15	Academic degree awarded	Master
16	Availability of an appendix to the license for training personnel	KZ87LAA00036465
17	Availability of accreditation of educational programs	
	Name of the accreditation body	
	Duration of accreditation	

4. COMPETENCE MODEL OF A GRADUATE

Objectives of the educational program

Promoting the formation of the graduate's ability to:
To organizational and managerial activities:

1. Comprehensively manage projects, resources (financial, material, human) and business processes at all stages of the life cycle of transport infrastructure facilities (from design to operation).
2. Organize, plan and coordinate the work of performers, production units and contractors. Make informed management decisions, including in non-standard situations and conditions of uncertainty, and be responsible for them.
3. Develop and implement strategic and operational plans for construction production, including time and network schedules.
4. Implement effective quality control, monitoring, and auditing of transport construction processes.

Assistance in the formation of graduate readiness:

1. to develop design documentation for the creation and modernization of railways and highways, transport and oil and gas facilities;
2. to carry out design work on the creation and modernization of the transport complex of the Republic of Kazakhstan;
3. develop technical documentation and methodological materials, proposals and measures for the creation and modernization of the transport complex;
4. to carry out a feasibility study and a comprehensive justification of the decisions taken and implemented in the field of operation and repair of railways, bridges, tunnels and subways;
5. apply the results in practice, show a desire for self-development, improve their skills and professional skills;
6. ensure the economical and safe use of natural resources, energy and materials during the operation and repair of railways, bridges, tunnels and subways.

Area of professional activity: Engineering, manufacturing and construction industries:

Learning outcomes

P01- Analyze scientific articles, research and business literature in a foreign language.

P02- Understand the psychological aspects of management to create a healthy working environment, form effective teams and manage them.

P03- Manage resources, projects, and construction processes, including the sequence of work, assignment of tasks to teams, and quality control.

P04- To make plans for scientific research, including the definition of goals, objectives, methods and deadlines.

P05- Comprehensively analyze a project in terms of its life cycle and risks, identify and assess risks using quantitative and qualitative methods, and make informed decisions that increase the sustainability, efficiency, and safety of construction projects.

P06- To implement automated systems for managing construction processes, taking into account the use of AI and automation

P07- Apply the principles of lean manufacturing to improve the competitiveness and efficiency of organizations, having the ability to analyze productivity and process efficiency using key performance indicators (KPIs).

P08- Apply the main regulatory legal acts regulating activities in the field of transport construction, mechanisms of state expertise, construction supervision and licensing.

PO9 - Demonstrates an understanding of the principles of building digital models of transport systems, including the use of artificial intelligence to analyze and optimize processes.

Objects of professional activity:

The field of professional activity of graduates includes the fields of science and technology related to the design, construction, operation, reconstruction and modernization of transport facilities, railway and road transport, as well as engineering of transport infrastructure.

1. state and local executive authorities in the field of railway and motor transport, as well as engineering of transport infrastructure and their regional divisions;
2. organizations and enterprises of the transport industry engaged in the management, operation and maintenance of railways, highways, bridges, tunnels, subways and other transport infrastructure facilities;
3. design, construction, research and production organizations working in the field of materials science technologies, processing and construction processes in the creation and modernization of transport facilities.

Types of professional activity:

1. production and technological;
2. organizational and managerial;
3. Experimental research;
4. settlement and design.

Functions of professional activity:

1. managerial activity involving the development of a strategy for the functioning and development of organizations in the transport industry, as well as the organization of conditions for their effective work;
2. preparation and modernization of transport infrastructure facilities, backbone networks and traffic control systems;
3. analysis and development of solutions for the improvement of technological processes, the introduction of innovative methods and modern engineering solutions;
4. carrying out research and design work aimed at improving the efficiency of operation and safety of transport facilities.

List of specialist positions:

1. the first head of the production organization (enterprise);
2. Deputy head of the production organization (enterprise);
3. Chief engineer of the production organization (enterprise);
4. Head of the structural unit of the production organization (enterprise);
5. Deputy head of the structural unit of the production organization (enterprise);
6. Engineer, design engineer, manager, head of laboratory.

Professional certificates obtained at the end of the training: Not provided.

Requirements for the previous level of education: Higher education (bachelor's degree).

The educational program of the specialized master's degree includes one type of practice: industrial practice.

Final certification

The objectives of the thesis are to identify the degree of assimilation by the bachelor of the content of the educational program, to check his readiness for independent activity in the direction of the educational program, to consolidate and deepen practical work skills. A comprehensive exam is also provided.3. Control and analytical functions

Experimental research work of a Master's student (EIRM)

The planning of the master's student's experimental research work (EIRM) in weeks is determined based on the standard time of the master's student's work during the academic week. The number of credits allocated for the implementation of the EIRM in a specific academic period is determined by the working curriculum of the specialized educational program.

The EIRM should:

correspond to the profile of the master's degree program, within which the master's project is being implemented and defended;

It should be based on modern achievements of science, technology and production, contain specific practical recommendations and independent solutions to scientific, technical and managerial tasks.;

performed using advanced information technologies;

include experimental research (methodological, analytical or practical) sections confirming the main provisions of the master's project.

Organization and conduct of EIRM

Within the framework of the EIRM, the individual master's work plan provides for mandatory scientific internships in scientific organizations and (or) organizations of relevant industries or fields of activity to familiarize themselves with innovative technologies and modern types of production.

EIRM is planned in parallel with other types of educational work or in a separate period of the educational process.

The results of the experimental research work are drawn up by the graduate student in the form of a report on the results of each period of its completion.

The final result of the implementation of the EIRM is a master's project.

The purpose of the AIRM

Obtaining new scientific and practical results that are important for the development of theory and practice in the relevant subject area, as well as mastering theoretical and experimental methods for studying objects (processes, phenomena, structures, projects) in this field.

EIRM tasks

formation of the master's student's skills in theoretical and practical experimental research work;

development of creative thinking, independence, deepening and consolidation of acquired theoretical and practical knowledge;

identification of the most gifted and talented undergraduates, using their scientific and intellectual potential to solve urgent problems of science and technology;

formation of the undergraduate student's interest in research activities, teaching methods and methods of independent solution of applied and research tasks.

The purpose of the scientific internship

The scientific internship is conducted for the purpose of:

completing the tasks of the master's thesis;

familiarization with innovative technologies and new types of production;

studying the latest theoretical, methodological and technological achievements of Russian and foreign science;

familiarization with modern methods of scientific research, processing and interpretation of experimental data;

consolidation of theoretical knowledge gained in the learning process, as well as the acquisition of practical skills, competencies and professional experience in the field of study;

mastering advanced domestic and foreign experience.

Requirements for the implementation of the EIRM

The experimental research work of a master's student must:

correspond to the profile of the master's degree program in which the master's project is being implemented and defended;

It should be based on modern achievements of science, technology and production and contain specific practical recommendations, as well as independent solutions to scientific and managerial tasks.;

performed using advanced information technologies;

include experimental research (methodological, analytical, practical) sections reflecting the main protected provisions.

The department implementing the master's degree program sets special requirements for the preparation of a master's student in the research part of the program.

Special requirements for undergraduates

Special requirements include:

knowledge of modern issues in the relevant branch of knowledge;

availability of specific specialized knowledge on the topic of scientific research (master's project);

the ability to practically carry out scientific research and experimental work in the chosen scientific field related to the master's program;

knowledge of modern software products and skills of working with Internet information resources.

Organization and content of the AIRM

Scientific supervisors are required to ensure the high-quality organization of the EIRM, its methodological formulation and monitoring of implementation.

The main content of the EIRM is reflected in the individual work plan of the graduate student.

Experimental research work at the department can be carried out in the following forms:

performing the tasks of the supervisor in accordance with the approved EIRM plan;

participation in scientific, practical and theoretical seminars on the subject of research, as well as in the scientific work of the department;

presentations at conferences of young scientists;

preparation and publication of abstracts and scientific articles;

preparation and protection of scientific reports on the areas of ongoing research;

participation in research projects of the department carried out within the framework of budgetary and extra-budgetary programs or grants, as well as in partner organizations for the implementation of the Master's degree program;

preparation and defense of the master's project.

The list of forms of experimental research work for undergraduates of specialized studies can be specified and supplemented depending on the specifics of the master's program.

EIRM Results

In the first semester:

approval of the topic of the master's project at the meeting of the Academic Council of the Academy;

development and approval of an individual master's work plan with an indication of the main activities and deadlines for their implementation;

definition of goals, objectives, object, subject and scope of research.

In the second semester:

collection and analysis of practical material on the topic of the master's project;

development of a methodology for data collection, methods for processing and evaluating the reliability of results;

performing at least 50% of the volume of theoretical and experimental work on the research topic;

implementation of measures provided for in the individual work plan.

In the third semester:

processing and analysis of factual material, development of illustrative and graphic materials on the research topic;

performing 100% of the volume of theoretical and experimental work;

preparation and publication of at least one scientific article and/or participation in a report at a scientific and practical conference;

passing the semester assessment based on the results of the EIRM;

preparation of the final text of the master's project.

Final certification of the master's student

The final certification is carried out in the form of writing and defending a master's thesis (project).

The purpose of the final certification is to assess the level of professional and managerial training of a graduate student, the developed competencies, readiness to independently perform professional tasks and the compliance of his training with the requirements of the master's degree program.

Students who have successfully completed the educational process in accordance with the requirements of the educational program, work curriculum and academic disciplines, as well as those who have completed a preliminary defense based on the results of their dissertation research, are allowed to take final certification.

5. MATRIX OF CORRELATION OF LEARNING OUTCOMES IN THE EDUCATIONAL PROGRAM WITH ACADEMIC DISCIPLINES/MODULES

№	Name of the discipline	Number of credits	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
1	Management	2			+						+
2	Foreign Language (Professional)	2	+							+	
3	Management Psychology	2		+							
4	Lean Manufacturing	4					+		+		
5	SMART technologies in transport							+			+
6	Organization and planning of scientific research	5				+					
7	Legislation and Regulation in Transport Construction	4								+	
8	Integrating AI into Transportation Systems	5						+			+
9	Use of software for the design and simulation of transport systems							+			+
10	Life Cycle Management of Transport Construction Projects	6			+		+				
11	Construction Project Risk Management				+		+				
12	Internship	9	+	+	+	+	+	+	+	+	+
12	Experimental research work of a master's student, including internships and master's projects	13	+	+	+	+	+	+	+	+	+
13	Final certification	8	+	+	+	+	+	+	+	+	+

6. STRUCTURE OF THE MASTER'S DEGREE PROGRAMME IN THE FIELD OF STUDY

№	Name of discipline cycles	Total labor intensity	
		In academic hours	In academic credits
1.	**Theoretical training**	**1170**	**39**
1.1	**Cycle of basic disciplines (DB)**	**300**	**10**
1)	**University Component (BK):**	180	6
	Management	60	2
	Foreign Language (Professional)	60	2
	Management Psychology	60	2
2)	**Elective Component (AC)**	**120**	**4**
1.2	**Cycle of Major Disciplines (PD)**	**870**	**29**
1)	**University component**	**270**	**9**
	Organization and planning of scientific research	150	5
	Legislation and Regulation in Transport Construction	120	4
2)	**Optional component**	**330**	**11**
3	**Experimental and research Master's Degree Student Work (EIRM)**	**390**	**13**
1)	Experimental and research work Master's student, including internships and master's projects	390	13
3	**Additional types of education** (FHE)		
4	**Final certification (IA)**	**240**	**8**
1)	Registration and defense of the master's thesis Project	240	8
	Total	**1800**	**60**

7. CURRICULUM FOR THE ENTIRE PERIOD OF STUDY

АО "ALT Университет имени Мухамеджана Тынышпаева"

Форма обучения: очная

УЧЕБНЫЙ ПЛАН

Направление подготовки:
7М073 Архитектура и строительство
Группа образовательных программ:
М126 Транспортное строительство
Наименование образовательной программы:
7М07351 - Менеджмент транспортного строительства

Срок обучения: 1 год

Прием: 2025 год

Степень: магистр техники и технологий

№	Код дисциплины	Наименование циклов и дисциплин	Общая трудоемкость		Форма контроля, семестр		Объем учебной нагрузки, часы						Распределение по семестрам		Закрепление за кафедрой
								Контактные					1 курс		
			в академических часах	в академических кредитах	Экзамен	КП (КР)	Всего часов	лекции	практические	лабораторные	СРМП	СРМ	1 сем. 15 недель	2 сем. 15 недель	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17
1.	ТЕОРЕТИЧЕСКОЕ ОБУЧЕНИЕ														
1.1.	ЦИКЛ БАЗОВЫХ ДИСЦИПЛИН (БД)														
1.1.1.	**Вузовский компонент**		180	6			180	30	15	0	45	90	6	0	
1.1.1.1	23-0-M-VK-Meng	Менеджмент	60	2	1		60	15			15	30	2		ТУиБ
1.1.1.2	23-0-M-VK-Iya(P)	Иностранный язык (профессиональный)	60	2	1		60		15		15	30	2		LE
1.1.1.3	23-0-M-VK-PU	Психология управления	60	2	1		60	15			15	30	2		СГДиФВ
1.1.2.	**Компонент по выбору**		120	4	1	0	120	15	15	0	15	75	4	0	
1.1.2.1.	23-0-M-KV-BP	Бережливое производство	120	4	1		120	15	15		15	75	4		ПС
	[illegible]	SMART технологии на транспорте													
	ВСЕГО ПО ЦИКЛУ БД		300	10			300	45	30	0	60	165	10	0	
1.2.	ЦИКЛ ПРОФИЛИРУЮЩИХ ДИСЦИПЛИН (ПД)														
1.2.1.	**Вузовский компонент**		270	9			270	30	30	0	30	180	10	0	
1.2.1.1.	25-0-M-KV-OPNI	Организация и планирование научных исследований (англ.)	150	5	1		150	15	15		15	105	5		АСИ
1.2.1.2.	25-0-M-KV-ZNRTS	Законодательство и нормативное регулирование в транспортном строительстве	120	4	1		120	15	15		15	75	5		АСИ
1.2.2.	**Компонент по выбору**		330	11	2	0	330	30	30	0	30	240	10	0	
1.2.2.1.	25-0-M-KV-UITS	Интеграция ИИ в транспортные системы	150	5	1		150	15	15		15	105	5		АСИ
	25-0-M-KV- IPOPM	Использование программного обеспечения для проектирования и моделирования транспортных систем													
1.2.2.2.	25-0-M.-KV-UZhCOS	Управление жизненным циклом объектов транспортного строительства	180	6	1		180	15	15		15	135	5		АСИ
	25-0-M.-KV-URSP	Управление рисками строительных проектов													
1.2.3.	25-0-M-VK-PPr	Производственная практика	270	9	2		270							9	
	ВСЕГО ПО ЦИКЛУ ПД		870	29			870	60	60	0	60	420	20	9	
2.	**Экспериментально-исследовательская работа магистранта (ЭИРМ)**		390	13			390							13	
1)	25-0-M-VK-EIRM	**Экспериментально-исследовательская работа магистранта, включая прохождение стажировки и выполнение магистерского проекта**	390	13	2									13	АСИ
3.	**Дополнительные виды обучения (ДВО)**														
	Итого теоретическое обучение		1170	39			1170	105	90	0	120	585	30	9	
4	**Итоговая аттестация (ИА)**		240	8			240							8	
1)	25-0-M-VK-OZMP	**Оформление и защита магистерского проекта (ОиЗМП)**	240	8										8	АСИ
	ИТОГО ЗА ВЕСЬ ПЕРИОД ОБУЧЕНИЯ		1800	60			1800	105	90	0	120	585	30	30	

Согласовано:

И.о. Проректор по АД _____ Коджабергенова А.К.

Разработано:

Директор института ТиС _____ Абдрешов Ш.А.

Заведующий кафедрой АСИ _____ Кулманов К.С.

8. CATALOG OF UNIVERSITY COMPONENT DISCIPLINES
EDUCATIONAL PROGRAMS 7M07351 - TRANSPORT CONSTRUCTION MANAGEMENT (PROFILE)

Education level: Master's degree **Duration of study: 1 years** **Year of admission: 2025**

Cycle	Component	Name of the discipline	Total labor intensity		Term	Learning outcomes	Brief description of the discipline	Prerequisites	Post-requirements
			in academic hours	in academic loans					
2	3	4	5	6	7	8	9	10	11
BD	UC	Management	60	2	1	RO3 RO2	Formation of students" theoretical knowledge and practical skills in the field of organization, planning, management, control and coordination of the processes of construction and operation of transport facilities, taking into account the specifics of the industry, modern technologies, economic, legal and environmental requirements, regulatory framework and modern methods of project management	Fundamentals of Economics and Entrepreneurship, Managerial Economics	Industrial practice, Experimental research work of a graduate student
BD	UC	Foreign language (professional)	60	2	1	RO1 RO8	To form students" communicative competence in a foreign language in professional areas, this includes the development of oral and written language skills, reading and understanding professionally oriented texts, conducting business correspondence, participating in discussions and negotiations on regulatory legal acts, expertise, as well as using the language for professional communication.	Foreign language	Experimental research work of a graduate student
BD	UC	Psychology of management	60	2	1	RO2	Formation of a systematic understanding of the psychological aspects of managerial activity, leadership qualities, motivation, behavior and communication management in organizations. It is aimed at studying the theoretical and methodological foundations of management psychology and ways to solve them, familiarization with methods of studying important socio-psychological characteristics of individuals and teams, professional, interpersonal and intrapersonal problems by means of management psychology.	Philosophy, Sociology, Political Science, Psychology	Industrial practice, Experimental research work of a graduate student

BD	UC	Organization and planning of scientific research	150	5	1	RO4	The discipline focuses on a systematic approach to the development, execution and management of research projects. Special attention is paid to strategic planning, resource allocation, project management and collaboration between researchers. Students learn how to develop research proposals, set goals, and evaluate results, contributing to innovation and efficiency in scientific endeavors.	Organization of construction of transport infrastructure facilities	Industrial practice, Experimental research work of a graduate student
BD	UC	Gesetzgebung und regulatorische Regelung im Verkehrsbau	120	4	1	RO8	The discipline is aimed at developing students' knowledge of the laws and regulations governing activities in the field of transport construction. The basics of legal regulation of the design, construction, reconstruction and operation of transport infrastructure facilities, as well as the interaction of participants in the construction process with government authorities and regulatory structures are considered.	Surveys and design of highways	Experimental research work of a graduate student

9. CATALOG OF DISCIPLINES OF THE COMPONENT OF CHOICE
EDUCATIONAL PROGRAMS 7M07351 - TRANSPORT CONSTRUCTION MANAGEMENT (PROFILE)

Education level: Master's degree **Duration of study: 1 years** **Year of admission: 2025**

Cycle	Component	Name of the discipline	Total labor intensity		Term	Learning outcomes	Brief description of the discipline	Prerequisites	Post-requirements
			in academic hours	in academic loans					
2	3	4	5	6	7	8	9	10	11
PD	EC	Lean manufacturing	120	4	1	PO5 PO	Mastering the theoretical foundations and practical tools of lean manufacturing aimed at increasing productivity, quality, optimizing processes and reducing costs in various areas of enterprise activity in order to increase the efficiency of business processes and use the principles of lean manufacturing. Managerial competencies in process analysis and decision-making are being developed	Resource conservation in transport	Industrial practice, Experimental research work of a graduate student
		SMART technologies in transport				PO6	The discipline reveals intelligent technologies of digital monitoring, automation and management of transport infrastructure facilities. Develops competencies in the application of artificial intelligence systems and digital counterparts to improve operational safety, reliability and efficiency. The methods of building SMART systems, digital modeling, data analysis and forecasting are being mastered to ensure sustainable transport development.	Digital diagnostics of construction facilities	Industrial practice, Experimental research work of a graduate student
PD	EC	Integration of AI into transport systems	150	5	1	PO6	The integration of artificial intelligence (AI) into transportation systems includes the use of machine learning algorithms and data analytics to optimize routes, manage traffic, and improve safety. AI analyzes large amounts of information, predicts traffic, and improves transportation infrastructure planning, contributing to more efficient and sustainable transportation solutions.	Fundamentals of the design of transport facilities	Industrial practice, Experimental research work of a graduate
		Using software for the design and modeling of transport systems					Formation of students' knowledge and practical skills in the application of modern digital technologies and specialized software, artificial intelligence in the process of designing and modeling transport infrastructure facilities, taking into account regulatory requirements and modern technologies, as well as the formation of practical skills in creating, analyzing and optimizing transport system projects.	Digital diagnostics of construction facilities	Industrial practice, Experimental research work of a graduate

PD	EC	Life cycle management of transport construction facilities	180	6	1	PO3 PO5	Formation of students' systematic understanding of the stages of the life cycle of transport construction facilities (especially highways, bridges, transport interchanges) and the development of managerial competencies for effective planning, coordination, monitoring and completion of projects at all stages of their existence. Knowledge of management methods at all stages of the life cycle	Organization and planning of construction of transport facilities	Industrial practice, Experimental research work of a graduate
		Risk management of construction projects					Mastering methods for identifying, analyzing, evaluating and minimizing risks that arise at all stages of construction projects, with an emphasis on transport infrastructure facilities. Formation of students' managerial decision-making skills in conditions of uncertainty and high degree of responsibility. Skills in developing risk management strategies.	Organization and planning of construction of transport facilities	Industrial practice, Experimental research work of a graduate

EXPERT CONCLUSIONS
on the educational program 7M07351 Management of Transport Construction (profile)

The implementation of the educational program 7M07351 Management of Transport Construction (profile) is carried out through the sequence of studied disciplines, with the establishment of specific tasks and target indicators. There is a clear interdisciplinary interaction, which consists of a complex connection between the content of individual academic disciplines, through which the internal unity of the training program for specialists is achieved.

The purpose of the educational program is relevant, formulated quite concisely, and combines the learning outcomes. The description of the disciplines reflects their goals and content as an indicator of achieving the learning outcomes for this educational program. Additionally, the educational program, developed based on the professional standard, includes the main job functions in the competencies and learning outcomes, as well as the types of connections with employers, such as guest lectures, lectures by top managers, and the presence of departmental branches at organizations.

Thus, the educational program 7M07351 Management of Transport Construction (profile) Digital Technologies in Transport Facilities, submitted for expert review, fully complies with the requirements of the State Educational Standard, has a clear sequence of development, meets the current demands of the labor market, professional standards, and can be implemented for the training of personnel in the educational program 7M07351 Management of Transport Construction (profile) in the field of study.

Expert
Director of Saulet-SKB LLP **Oshanov A.E.**

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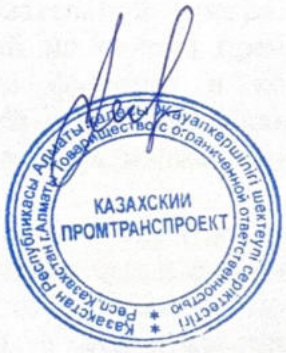
Expert
Chief Engineer
Kazakh Promtransproject LLP **Musaev M.T.**



Review
of the educational program
in the field of training «7M07351 - Transport construction management (profile)»

The Bachelor's degree program «7M07351 - Transport construction management (profile)» contains the following information: graduate's qualifications, form and duration of study, direction and characteristics of graduate activities, a complete list of competencies that a graduate should possess as a result of mastering this educational program.

The disciplines of the curriculum according to the reviewed educational program form the entire necessary list of general cultural and professional competencies provided by the State Educational Standard for the relevant types of activities.

The curriculum of the educational program defines a list of all academic disciplines of the mandatory component and the elective component, the complexity of each academic discipline in credits, the sequence of their study, types of training sessions and forms of control. The catalog of elective subjects and the Catalog of the intra-university component fully reflect the continuity of the disciplines Underground and aboveground tracks: Integration of AI into transport systems; Lean manufacturing; Life cycle management of transport construction facilities.

The sequence of studying the disciplines has been observed, and the disciplines necessary for production and the technological process have been included.

The content of the work programs of academic disciplines and practices allows us to conclude that it corresponds to the competence of the graduate model.

The educational program provides for professional and practical training of students in the form of practice. The content of the internship programs testifies to their ability to form the practical skills of students.

Experienced teaching staff, leading representatives of the employer, and students were involved in the development of the educational program, and their requirements were taken into account when forming professional cycle disciplines.

Conclusion:

In general, the reviewed educational program meets the basic requirements of the State Educational Standard, the national qualifications framework, the industry qualifications framework, professional standards, the Atlas of New Professions and contributes to the formation of general cultural and professional competencies in the field of training «7M07351 - Transport construction management (profile)»

The reviewer

Assoc.professor of the department of "TSiU"
KazADI named after L.Goncharov

Abiev B.A.

12. LETTERS OF RECOMMENDATION

Dear Meruert Sovetovna

The management of KazdorNII JSC, represented by Yerembayev O.M. got acquainted with the content of the educational program «7M07351 - Transport construction management (profile)» and made the following recommendations:

- to include the following disciplines in the content of the educational program: roads,
- to increase the number of hours allocated for conducting part of laboratory and practical classes at employers' bases in order to form certain types of professional competencies;
- to update the content of educational programs by including in the cycle of basic and profile modules disciplines reflecting modern innovative technologies in the transport and communication sphere. It is proposed to include the following disciplines: Integration of AI into transport systems; Lean manufacturing; Life cycle management of transport construction facilities.
- increase the number of hours allocated for conducting production practices;

enable disciplines:

- Integration of AI into transport systems;
- Lean manufacturing;
- Life cycle management of transport construction facilities.

Director of the Almaty branch of KazdorNII JSC **Yerembaev O.M.**

13. PROTOCOLS OF REVIEW AND APPROVAL

Academy of Logistics and Transport

PROTOCOL No. 7

Meetings

Des akademischen Ausschusses für das Bildungsprogramm und der führenden Lehrer des Lehrstuhls "Architektonisch-Bauingenieurwesen»

city of Almaty **"18"02. 2025 year**

Chairman:Kulmanov K.S.

Secretary: Begezhanova G.S.

Attended by: Head of the Department of "ASI" Ph.D., Assoc.Professor Kulmanov K.S., Candidate of Technical Sciences, associate professors: Bondar I.S.,Espayeva G.A., Tursumbekova H.S., Candidate of Technical Sciences, assistant. professors; Dyusengalieva T.M., Uteshbaeva A.A., Dzhaksenbaev E.K., Murzalina G.B., Dzhumagaliev T.K., senior lecturers; Zhigitbaeva B.E., Suleimenov I.T., Kalpenova Z.D., Karimova M.B.

Representatives from the production: Apple Build Project LLP, Chief engineer Kurmanbekov Zh.K., Director of the Almaty branch of KazdorNII Yerembaev U.M., Saulet-SKB LLP, Director Oshanov A.E., Kazakh Promtransproekt LLP, Chief engineer Musaev M.T.

AGENDA:

1. Consideration of the graduate's competence model
2. Consideration of the possibility of including disciplines in QED and RUP

On the first question

MADE A SPEECH:

The head of the department, K.S. Kulmanov, proposed to consider the graduate's competence model at 3 levels of education: bachelor's degree, master's degree, doctoral degree.

The graduate's competence model includes the following parts:

- The purpose and objectives of the educational program;
- Learning outcomes;
- Area, objects, types and functions of professional activity;
- The list of positions in the educational program;
- Professional certificates obtained upon graduation;
- Requirements for the previous level of education.

PERFORMED:

Representative of employers: Yerembaev O.M. who proposed, due to the specifics of their organization, to reflect the following in the objects of professional activity: Modern innovative technologies in the transport and communication sphere

THE SPEAKER was:

Member of the department Tursumbekova H.S. who proposed to approve

After reviewing the graduate's competence model, it was proposed to approve this Model for 3 levels of education.

THEY DECIDED:

- provide a graduate's competence model for 3 levels of education: Bachelor's degree, Master's degree, doctoral degree for consideration and approval by the Council of the Institute of Transport and Construction.

On the second question

MADE BY: Head of the department K.S. Kulmanov with a proposal to hear representatives of employers and trainees on the inclusion of new disciplines in the CAD and RUP of admission in 2025.

MADE BY: representative of employers of «Apple Build Project» LLP, chief engineer Kurmanbekov Zh.K.

Organizations are interested in specialists with a good level of training and knowledge in the field of design and construction of highways. Integration of AI into transport systems; Lean manufacturing; Life cycle management of transport construction facilities.

THEY DECIDED:

1. Take the information into consideration;
2. Take into account the suggestions and recommendations of employers and students;
3. Consider the inclusion in the RUP of the following disciplines: Integration of AI into transport systems; Lean manufacturing; Life cycle management of transport construction facilities.

Chairman: **Kulmanov K.S.**
Secretary: **Begezhanova G.S.**

MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN
JSC "ALT UNIVERSITY NAMED AFTER MUKHAMEDZHAN TYNYSHPAYEV"
INSTITUTE OF TRANSPORT AND CONSTRUCTION

EXTRACT from the Protocol No. 8
of the extraordinary meeting of the Educational and Methodological Bureau (UMB)
of the Institute of Transport and Construction
in Almaty on March 17, 2025.

Chairman: Abdreshov S.A.
Secretary: Murzalina G.B.
Were present: Abdreshov Sh.A., Apple Build Project LLP, Chief engineer Kurmanbekov Zh.K., Director of the Almaty branch of KazdorNII Yerembaev U.M., Saulet-SKB LLP, Director Oshanov A.E., Kazakh Promtransproekt LLP, Chief engineer Musaev M.T., Murzalina G.B.

AGENDA:

1. Discussion of new educational programs for the 2025-26 academic year.

On the issue

WE LISTENED TO: the director of ITiS, Sh.A. Abdreshov, who proposed to consider the following sections of educational programs for admission in 2025: the graduate's competence model and educational program passports, as well as work curricula, catalogs of the university component (CVK) and catalogs of elective disciplines (CED).

PERFORMED:

1) The head of the department, K.S. Kulmanov, who presented for consideration the sections of the new educational program 7M07351 - Transport construction management (profile) for admission in 2025: the graduate's competence model, the passport of the educational program, as well as the working curriculum, the catalog of the university component (CVK) and the catalog of elective disciplines (CED).

In connection with the opening of a new group of educational programs B126 – "Transport Construction", the materials submitted for consideration were developed. A meeting of the Academic Committee on Educational Programs and leading teachers of the department was held at the Department of Architectural and Construction Engineering with the involvement of representatives of employers and students to discuss the structure and content of the new educational program. Following the discussion, a positive decision was made to approve them.

The presented materials were developed with the participation of employers, students and graduates, taking into account the requirements of regulatory legal acts. The working curriculum and CED for admission in 2025 have been drawn up and agreed with employers.

THEY DECIDED:

1. To approve the presented new educational program 7M07351 - Transport construction management (profile) for admission in 2025, including the Graduate's Competence Model, QED, QVC, work curriculum and educational program passport.

2. Submit these documents for consideration and approval by the Academic Council of the Academy.

Chairman of UMB ITiS **Abdreshov S.A.**
Secretary of UMB ITiS **Murzalina G.B.**

14. APPROVAL SHEET

№	Full name	Place of work/study	Post	Date of approval	Signature
	Сулеева Н.З.	ИТиС	директор		
	Даубаев К.Ж.	ИЛиБ	директор		
	Тайгожинова А.К.	ИЭиБ	директор		
	Карибаева Т.Б.	ALT Универ.	зав. каф ТС		
	Abdiraiymova A.S.	ALT University	head of depart		
	Smailova F.I	ALT University	Head of LE department		
	Мусалиева Р.Д.	ALT Универ.	Зав.каф. ТЧоб.		
	Чиланбаев Т.О.	ALT Универ.	Зав.каф. ПС.		
	Карымсакова Н.	каф. АУ	зав. каф		
	Куменов К.Е.	каф. АСИ	зав каф		

15. CHANGE REGISTRATION SHEET

№	Section, paragraph Document	Type of change (replace, cancel, add)	Number and date Notice	Change made	
				Date	Surname and initials, signature, position