

**AGREED**

**Chief Engineer of the project,  
Director of LLP «Kazakh Promtransproject»  
Musaev M.T.  
«17» 03 2025 y.**

**APPROVING**

**Director of the Institute  
«Transport and Construction»  
Abdreshov S.A.**

**«17» 03 2025 y.**

**CATALOG OF DISCIPLINES OF THE UNIVERSITY COMPONENT  
EDUCATIONAL PROGRAM 7M07170 – Transport structures (profile)**

**Education level: Master**

**Duration: 1 year**

**Admission year: 2025 y.**

№	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					
1	2	3	4	5	6	7	8	9	10	11
1	BD	UC	Management	60	2	1	LO1	Forms knowledge about the organization as an object of management, considers situational and process approaches in management, engineering and reengineering of business processes, explores the theory and practice of management, explores the role functions of the manager and subordinates, studies ways of planning the strategy of management activities, stimulating performers to high-performance work, organizing effective control, etc., gives practical skills in developing style management and management decision-making tactics.	fundamentals of Economics and entrepreneurship	Final certification
2	BD	UC	Foreign language (professional)	60	2	1	LO2	Mastery of professional English at an advanced level (for non-linguistic areas), grammatical characteristics of scientific style in its oral and written forms, professional oral communication in monological and dialogical form according to the educational program, as well as the ability to demonstrate research results in the form of reports, abstracts, publications and public discussions; interpret and present the results of	Discipline cycle database undergraduate	Final certification

								scientific research on in a foreign language.		
3	BD	UC	Psychology of management	60	2	1	LO1	It is aimed at studying the theoretical and methodological foundations of management psychology, the main socio-psychological problems of management and ways to solve them, familiarization with the methods of studying important socio-psychological characteristics of the individual and the team, professional, interpersonal and intrapersonal problems by means of management psychology.	Disciplines of the bachelor's DB cycle	Final certification
4	PD	UC	The finite element method in transport construction tasks	150	5	1	LO3	The finite element method (FEM) in transport construction is used for the analysis and design of structures such as bridges and roads. It allows you to model complex mechanical processes, evaluate the strength of materials, and predict the behavior of structures under load. The FEM contributes to optimizing design solutions and improving the safety of transport infrastructure.	Elasticity and plasticity. Mechanics of an elastic deformable solid	Final certification
5	PD	UC	Methodology of scientific research	150	5	1	LO9	The discipline studies the system of principles and methods used to plan, conduct and analyze research. It includes choosing an approach, formulating hypotheses, collecting data and interpreting them. The methodology ensures the reliability and reproducibility of results, allowing researchers to objectively evaluate and justify their findings.	Within the framework of the Bachelor	Final certification
6	PD	UC	Production practice	270	9	2	LO6 LO7 LO8	Consolidation of theoretical knowledge acquired in the course of training; acquisition of skills in the practical use of professional knowledge acquired during theoretical training; training in the skills of solving practical and managerial tasks; familiarization with the specifics of a bachelor's professional activity in a particular industry; formation of a professional position of a specialist, style of behavior, mastering professional ethics	Diagnostics of transport infrastructure facilities	Experimental research work of a master's student
7	PD	UC	Experimental research work of a graduate	390	13	1,2	LO4 LO6 LO7	Well-developed professional and managerial competencies, readiness to independently perform professional tasks and compliance of his training with the requirements of the master's degree program	Sustainability of transport infrastructure facilities	Experimental research work of a master's student

			student							
8	PD	UC	Final certification	240	8	2	LO4 LO6 LO7 LO8	The objectives of the thesis are to identify the degree of assimilation of the content of the educational program, to check its readiness for independent activity in the direction of the educational program, to consolidate and deepen practical work skills. It also provides for passing a comprehensive exam.	Monitoring of the technical condition of transport infrastructure facilities	Experimental research work of a master's student

**Head of the department «Architectural and construction Engineering»**

**Kulmanov K.S.**