Head of the infrastructure development sector of the branch of «NC «Kazakhstan railways» JSC – «Almaty branch of the backbone network»

M.S. Bekbosunov

Director of the institute of Transport and construction of «M. Tynyshpayev ALT University» JSC

Sh.A. Abdreshov

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CATALOGUE OF ELECTIVE COMPONENT DISCIPLINES

EDUCATIONAL PROGRAM **6B07179 – Engineering and management of transport highways**

Education level: bachelor's degree **Duration of study: 3 years** **Year of admission: 2025**

Cycle	Component	Discipline name	Total workload		Trimester	Learning outcomes	Brief description of the discipline	Prerequisites	Postrequisites
			in academic hours	in academic credits					
1	2	3	4	5	6	7	8	9	10
GES	KV	Environmentally sustainable technologies	150	5	5	LO8	The discipline "Environmentally sustainable technologies" studies modern methods and innovative solutions aimed at minimizing the negative impact of human activities on the environment. The course examines the principles of sustainable development, energy-saving technologies, renewable energy sources, waste management strategies, and environmentally sound production processes.	The history of Kazakhstan, Kazakh (russian, foreign) language, Sociology, Cultural studies, Introduction to transport infrastructure, General course of transport routes	Philosophy, Political science, Professionally oriented foreign language, Occupational safety and health, Final certification
		Green economy and sustainable entrepreneurship				LO6,9	The discipline "Green Economy and Sustainable Entrepreneurship" is devoted to the study of environmentally oriented economic models and business strategies aimed at sustainable development. The course examines the concepts of the green economy, ESG (Environmental, Social, Governance) approaches, circular economy, sustainable business models and their impact on global	The history of Kazakhstan, Kazakh (russian, foreign) language, Sociology, Cultural studies, Introduction to transport infrastructure, General course of transport routes	Philosophy, Political science, Professionally oriented foreign language, Managerial economics, Time-management, The basics of cost accounting, Occupational safety and health, Transport logistics, Interaction of modes of transport, Organization and planning of the construction of highways, Organization of

							markets.		construction production, Infrastructure project management, Innovative project management methods, Final certification
		Fundamentals of financial literacy				LO6,9	The discipline is aimed at developing the ability to make informed financial decisions, plan income and expenditures, assess risks and effectively manage their resources in a market economy. It studies the basic knowledge in the sphere of finance and rational management of monetary resources, the concepts of financial system, budget, banking products, crediting, savings, investments, insurance, taxation and protection against financial fraud are considered.	The history of Kazakhstan, Kazakh (russian, foreign) language, Sociology, Cultural studies, Introduction to transport infrastructure, General course of transport routes	Philosophy, Political science, Professionally oriented foreign language, Managerial economics, Time-management, The basics of cost accounting, Transport logistics, Interaction of modes of transport, Organization and planning of construction of transport highways, Organization of construction production, Infrastructure project management, Innovative project management methods, Final certification
		Digital inclusion				LO2	The discipline "Digital Inclusion" is devoted to the study of the principles of ensuring equal access to digital technologies and information for all social groups, including people with disabilities. The course examines barriers to digital inequality, strategies for overcoming them, technologies for adapting the digital environment, and government initiatives to develop an inclusive digital society.	Engineering mathematics 1,2, Construction physics, Information and communication technologies, Basics of Python programming, Engineering graphics and computer modeling	BIM technologies in the construction of infrastructure facilities, Minor program 1, Final certification
		Basics of law and anti-corruption culture				LO6	The discipline outlines the fundamental concepts of law, the constitutional structure of the state power of the Republic of Kazakhstan, the rights and freedoms of citizens enshrined in the Constitution, the mechanism and protection of legitimate human interests in case of their violation. The discipline forms students' improvement of public and individual legal	The history of Kazakhstan, Kazakh (russian, foreign) language, Sociology, Cultural studies	Philosophy, Political science, Professionally oriented foreign language, Final certification

							awareness and legal culture, as well as a system of knowledge and citizenship on combating corruption as an antisocial phenomenon.		
BD	KV	Introduction to transport infrastructure	180	6	2	LO4,5	The course is aimed at providing fundamental knowledge about the structure, functioning, and development of transport systems, covering various modes of transport, their role in the economy, principles of design and operation, and modern trends in infrastructure.	Kazakh (Russian) language, Foreign language	Kazakh (Russian) language, Foreign language, Environmentally sustainable technologies, Green economy and sustainable entrepreneurship, Fundamentals of financial literacy, Managerial economics, Time-management, Artificial structures on transport routes, Engineering transport structures, Engineering networks and communications, Transport logistics, Interaction of modes of transport, Fundamentals of transportation corridor design, Introduction to project and process management, Design and calculation of railway lines, Design and calculation of highways, Organization and planning of construction of transport highways, Organization of construction production, Infrastructure project management, Innovative project management methods, Final certification
		General course of transport routes				LO5	The course covers the principles of design, construction, and operation of transport highways (automobile and railway), including the study of their types,	Kazakh (Russian) language, Foreign language	Kazakh (Russian) language, Foreign language, Environmentally sustainable technologies, Green economy

							structural elements, route alignment, engineering structures, as well as issues of safety, environmental impact, regulatory frameworks, and modern technologies in infrastructure development.		and sustainable entrepreneurship, Fundamentals of financial literacy, Managerial economics, Time-management, Artificial structures on transport routes, Engineering transport structures, Engineering networks and communications, Transport logistics, Interaction of modes of transport, Fundamentals of transportation corridor design, Introduction to project and process management, Design and calculation of railway lines, Design and calculation of highways, Organization and planning of construction of transport highways, Organization of construction production, Infrastructure project management, Innovative project management methods, Final certification
BD	KV	Geology and soil mechanics	150	5	4	LO3	The discipline is aimed at developing professional competencies in the field of engineering geology and soil mechanics to solve practical problems in assessing and analyzing the engineering and geological conditions of the construction of city streets and road infrastructure.	Technical mechanics, Building materials	Bases and foundations, Geotechnics in foundation engineering, Artificial structures on transport routes, Engineering transport structures, Final certification
		Geoinformation systems in geology				LO2,3	The discipline teaches the skills of engineering and geodetic calculations and methods of working with modern geodetic instruments to carry out marking work on the ground, control the production and quality of	Technical mechanics, Building materials	Bases and foundations, Geotechnics in foundation engineering, Artificial structures on transport routes, Engineering transport structures, Final

							work performed at each stage of the construction process, and monitor geological and hydrogeological processes.		certification
BD	KV	Bases and foundations	150	5	5	LO3	Formation of knowledge about the basic laws of soil behavior under load, the theory of stress-strain state and their interaction with structures. Studies the main methods for determining the sediment of foundations, the stability of slopes and slopes, as well as the morphology, dynamics and regional features of the upper horizons of the Earth's crust (lithosphere) and their relationship with engineering structures	Technical mechanics, Building materials, Building constructions, Geology and soil mechanics, Geoinformation systems in geology	BIM technologies in the construction of infrastructure facilities, Minor program 1, Final certification
		Geotechnics in foundation engineering				LO3	The discipline considers the formation and development of areas of plastic deformation in a homogeneous base of a buried flexible strip foundation when it is loaded within the framework of a model of a mixed problem of the theory of elasticity and the theory of soil plasticity.	Technical mechanics, Building materials, Building constructions, Geology and soil mechanics, Geoinformation systems in geology	BIM technologies in the construction of infrastructure facilities, Minor program 1, Final certification
BD	KV	Electrical engineering and the basics of electronics	90	3	3	LO8	he discipline considers electrical circuits of direct, alternating and three-phase currents, the principle of operation and purpose of the transformer and electrical machines, methods of measuring electrical quantities, application and general rules of operation of semiconductor devices and circuits. Teaching methods - analysis of specific situational tasks, group discussions.	Engineering mathematics 1, Engineering mathematics 2, Construction physics, Technical mechanics, Basics of Python programming, Engineering graphics and computer modeling,	Engineering networks and communications, IT in transport engineering, Artificial structures on transport routes, Engineering transport structures, Occupational safety and health, Highway construction technology, Technological processes of highway construction, Maintenance and repair of railway lines, Maintenance and repair of highways, Monitoring the condition of transport highways, Engineering structures monitoring systems, BIM technologies in the construction of infrastructure facilities, Minor program 1, Final certification

		Electrotechnical calculations of construction facilities				LO8	The discipline considers the electrical circuits of direct, alternating and three-phase currents, the principle of operation and purpose of the transformer and electrical machines, power supply and electrical lighting of building raincoats. Training methods - analysis of specific situational tasks, group discussions.	Engineering mathematics 1, Engineering mathematics 2, Construction physics, Technical mechanics, Basics of Python programming, Engineering graphics and computer modeling,	Engineering networks and communications, IT in transport engineering, Artificial structures on transport routes, Engineering transport structures, Occupational safety and health, Highway construction technology, Technological processes of highway construction, Maintenance and repair of railway lines, Maintenance and repair of highways, Monitoring the condition of transport highways, Engineering structures monitoring systems, BIM technologies in the construction of infrastructure facilities, Minor program 1, Final certification
BD	KV	Transport logistics	90	3	6	LO4	Transport logistics is a discipline that studies the organization, management and optimization of the processes of movement of material values (cargo) from the supplier to the consumer. It covers planning, implementation and control of transportation, storage and other related activities. The discipline "Transport logistics" plays a key role in the training of specialists capable of solving complex tasks related to the movement of material flows, which is an integral part of the functioning of modern business.	The history of Kazakhstan, Kazakh (Russian) language, Foreign language, Professionally oriented foreign language, Sociology, Cultural studies, Political science, Psychology, Green economy and sustainable entrepreneurship, Fundamentals of financial literacy, Managerial economics, Time-management, Introduction to transport infrastructure, General course of transport routes, Fundamentals of transportation corridor design, Introduction to project and process management, Design and calculation of railway	IT in transport engineering, Computer-aided design of transportation corridors, Automated highway design systems, Organization and planning of construction of transport highways, Organization of construction production, Infrastructure project management, Innovative project management methods, BIM technologies in the construction of infrastructure facilities, Minor program 1, Regulatory and technical documentation in transport construction, Minor program 2, The basics of cost accounting, Minor program 3, Final certification

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		Interaction of modes of transport				LO4	The discipline studies theoretical and practical aspects of the organization and management of transport processes involving two or more modes of transport. It examines the principles of effective interaction of various modes of transport in a single transport system to ensure optimal delivery of goods and passengers. This discipline is closely related to such areas of knowledge as logistics, supply chain management, transport economics and transport law. The acquired knowledge and skills will be useful to specialists working in transport companies, logistics centers, industrial enterprises and other organizations related to the transportation of goods and passengers.	The history of Kazakhstan, Kazakh (Russian) language, Foreign language, Professionally oriented foreign language, Sociology, Cultural studies, Political science, Psychology, Green economy and sustainable entrepreneurship, Fundamentals of financial literacy, Managerial economics, Time-management, Introduction to transport infrastructure, General course of transport routes, Fundamentals of transportation corridor design, Introduction to project and process management, Design and calculation of railway lines	IT in transport engineering, Computer-aided design of transportation corridors, Automated highway design systems, Organization and planning of construction of transport highways, Organization of construction production, Infrastructure project management, Innovative project management methods, BIM technologies in the construction of infrastructure facilities, Minor program 1, Regulatory and technical documentation in transport construction, Minor program 2, The basics of cost accounting, Minor program 3, Final certification
BD	KV	Artificial structures on transport routes	180	6	5	LO3,5	The course studies the design, construction, operation, and maintenance of engineering structures on transport routes (automobile, railway, and other types of transport) that ensure safe, efficient, and continuous movement across various obstacles, and is fundamental for the training of transport engineers and construction specialists, providing essential knowledge for the creation and maintenance of key elements of transport infrastructure.	Technical mechanics, Electrical engineering and the basics of electronics, Electrotechnical calculations of construction facilities, Introduction to transport infrastructure, General course of transport routes, Geology and soil mechanics, Geoinformation systems in geology, Building materials, Building constructions, Fundamentals of transportation corridor design	Maintenance and repair of railway lines, Maintenance and repair of highways, Monitoring the condition of transport highways, Engineering structures monitoring systems, Final certification
		Engineering transport structures				LO3,5	The discipline studies the design, construction, operation and reconstruction of various structures that ensure the functioning	Technical mechanics, Electrical engineering and the basics of electronics,	Maintenance and repair of railway lines, Maintenance and repair of highways, Monitoring

							of transport systems, covers a wide range of objects such as bridges, tunnels, roads, overpasses, flyovers, retaining walls, culverts and other artificial structures that are an integral part of the transport infrastructure.	Electrotechnical calculations of construction facilities, Introduction to transport infrastructure, General course of transport routes, Geology and soil mechanics, Geoinformation systems in geology, Building materials, Building constructions, Fundamentals of transportation corridor design	the condition of transport highways, Engineering structures monitoring systems, Final certification
BD	KV	Managerial economics	90	3	6	LO6,9	Formation of the conceptual apparatus and development of skills of economic analysis using modern models and patterns of economic science, consideration of economic problems and challenges facing the head of the firm. The study of this discipline will allow students to obtain and develop knowledge in the field of analytical research of economic, technological and technical parameters of the enterprise, as well as allow you to master the skills of using special methods of economic justification of management decisions and assessment of their consequences.	Green economy and sustainable entrepreneurship, Fundamentals of financial literacy, Introduction to transport infrastructure, General course of transport routes, Fundamentals of transportation corridor design, Design and calculation of railway lines, Design and calculation of highways	The basics of cost accounting, Transport logistics, Interaction of modes of transport, Organization and planning of construction of transport highways, Organization of construction production, Infrastructure project management, Innovative project management methods, Final certification
		Time-management				LO6,9	The discipline studies a system of methods, tools and approaches that are aimed at effective time management in order to achieve set goals. The course is designed to improve skills in organizing and optimizing the use of working time, increasing productivity, reducing stress, planning, delegation, using tools and technologies, as well as knowing your time and energy rhythms in order to use your time effectively.	Green economy and sustainable entrepreneurship, Fundamentals of financial literacy, Introduction to transport infrastructure, General course of transport routes, Fundamentals of transportation corridor design, Design and calculation of railway lines, Design and calculation of highways	The basics of cost accounting, Transport logistics, Interaction of modes of transport, Organization and planning of construction of transport highways, Organization of construction production, Infrastructure project management, Innovative project management methods, Final certification
PD	KV	Computer-aided design of transportation	150	5	8	LO 1,2,3,7,9	The discipline studies CAD software systems for the design of highways, including the creation of digital terrain models, tracing,	Basics of Python programming, Engineering geodesy, Educational practice	Final certification, Basic and profile disciplines of the master’s degree

		corridors					profile design, calculation of excavation volumes, construction of artificial structures and the formation of design documentation, in order to increase the efficiency, accuracy and speed of development of design solutions.	(geodetic), Fundamentals of transportation corridor design, Design and calculation of railway lines, Design and calculation of highways, Reconstruction of transport routes, Modernization of transport highways, Transport logistics, Interaction of modes of transport, BIM technologies in the construction of infrastructure facilities, Minor program 1	
		Automated design systems for transport highways				LO 1,2,3,7,9	The discipline studies the use of modern software packages for road design, including the creation of digital models, tracing, calculation of earthwork volumes and design of artificial structures, aimed at improving the accuracy, efficiency and speed of development of design solutions in transport construction.	Basics of Python programming, Engineering geodesy, Educational practice (geodetic), Fundamentals of transportation corridor design, Design and calculation of railway lines, Design and calculation of highways, Reconstruction of transport routes, Modernization of transport highways, Transport logistics, Interaction of modes of transport, BIM technologies in the construction of infrastructure facilities, Minor program 1	Final certification, Basic and profile disciplines of the master's degree
PD	KV	Organization and planning of construction of transport highways	180	6	9	LO3,4,6	The discipline studies the methods of organizing construction production during the construction of highways and railways, including the development of design documentation, drawing up plans, managing resources, quality and safety of work, as well as interaction with subcontractors, developing the competencies of specialists for the effective planning and implementation of construction processes.	Green economy and sustainable entrepreneurship, Fundamentals of financial literacy, Managerial economics, Time-management, Introduction to transport infrastructure, General course of transport routes, Highway construction technology, Technological	Final certification, Basic and profile disciplines of the master's degree

								processes of highway construction, Infrastructure project management, Innovative project management methods, Transport logistics, Interaction of modes of transport	
		Organization of construction production				LO3,4,6	The formation of students' professional skills on the basic principles and methods of organizing road works, organizational and technical training and calendar planning of road works, as well as gaining knowledge in the field of production and economic activities of enterprises when choosing rational options for organizational and planning solutions that ensure increased economic efficiency of production. Studies the principles and methods of project management, time control and planning, and resource allocation.	Green economy and sustainable entrepreneurship, Fundamentals of financial literacy, Managerial economics, Time-management, Introduction to transport infrastructure, General course of transport routes, Highway construction technology, Technological processes of highway construction, Infrastructure project management, Innovative project management methods, Transport logistics, Interaction of modes of transport	Final certification, Basic and profile disciplines of the master’s degree
PD	KV	Infrastructure project management	150	5	8	LO1,3,4	The discipline studies the management of projects for the creation and development of infrastructure facilities, covering planning, financing, organization of construction, risk management and interaction with stakeholders, developing in specialists the competencies for the successful implementation of complex projects on time, within budget and in compliance with quality and safety requirements	Green economy and sustainable entrepreneurship, Fundamentals of financial literacy, Managerial economics, Time-management, Introduction to transport infrastructure, General course of transport routes, Highway construction technology, Technological processes of highway construction, Transport logistics, Interaction of modes of transport	Organization and planning of construction of transport highways, Organization of construction production, Final certification
		Innovative project				LO1,3,4	The course studies modern approaches and	Green economy and	Organization and planning of

		management methods					tools to improve the efficiency of project activities, including flexible methodologies (Agile, Scrum), lean manufacturing (Lean), data visualization, artificial intelligence and innovative solutions, developing the competencies in specialists for successful project management, increasing adaptability and stakeholder satisfaction	sustainable entrepreneurship, Fundamentals of financial literacy, Managerial economics, Time-management, Introduction to transport infrastructure, General course of transport routes, Highway construction technology, Technological processes of highway construction, Transport logistics, Interaction of modes of transport	construction of transport highways, Organization of construction production, Final certification
PD	KV	Highway construction technology	180	6	7	LO 3,4,6,8	The discipline studies engineering and technical processes in the construction of roads and railways, including site preparation, earthworks, road surface construction, construction of artificial structures and the use of modern materials, forming in specialists the knowledge for organizing construction production, quality control, safety and compliance with environmental requirements.	Electrical engineering and the basics of electronics, Electrotechnical calculations of construction facilities, Design and calculation of railway lines, Design and calculation of highways	Occupational safety and health, Organization and planning of construction of transport highways, Organization of construction production, Infrastructure project management, Innovative project management methods, Maintenance and repair of railway lines, Maintenance and repair of highways, Regulatory and technical documentation in transport construction, Minor program 2, Final certification
		Technological processes of highway construction				LO 3,4,6,8	The discipline studies the methods and sequence of construction works during the construction of highways and railways, including site preparation, earthworks, construction of road surfaces, construction of bridges and overpasses, laying of the track superstructure for railways, as well as quality control technologies at all stages of construction.	Electrical engineering and the basics of electronics, Electrotechnical calculations of construction facilities, Design and calculation of railway lines, Design and calculation of highways	Occupational safety and health, Organization and planning of construction of transport highways, Organization of construction production, Infrastructure project management, Innovative project management methods, Maintenance and repair of railway lines, Maintenance and repair of highways, Regulatory and technical documentation in

									transport construction, Minor program 2, Final certification
PD	KV	Reconstruction of transport routes	180	6	7	LO5,7	The discipline studies engineering and technical measures aimed at improving the technical characteristics, capacity and safety of existing roads and railways, including strengthening the road surface, widening the roadway, constructing interchanges, replacing worn-out structures, and improving lighting and drainage systems.	Engineering geodesy, Educational practice (geodetic), Fundamentals of transportation corridor design, Design and calculation of railway lines, Design and calculation of highways, Production practice 1	Computer-aided design of transportation corridors, Automated highway design systems, Regulatory and technical documentation in transport construction, Minor program 2, Production practice 2/ Pre-graduate practice, Final certification
		Modernization of transport highways				LO5,7	The discipline studies modern approaches and technologies for the modernization of transport highways, including methods for increasing throughput, improving operational characteristics, reducing the negative impact on the environment and increasing traffic safety, aimed at creating efficient and environmentally friendly transport systems.	Engineering geodesy, Educational practice (geodetic), Fundamentals of transportation corridor design, Design and calculation of railway lines, Design and calculation of highways, Production practice 1	Computer-aided design of transportation corridors, Automated highway design systems, Regulatory and technical documentation in transport construction, Minor program 2, Production practice 2/ Pre-graduate practice, Final certification
PD	KV	Monitoring the condition of transport highways	150	5	7	LO7	The discipline studies methods of assessing and monitoring the condition of transport highways, including motorways and railways, examines methods of diagnosing pavements, roadbeds, artificial structures, as well as systems for collecting, processing and analyzing monitoring data, technologies for predicting wear, identifying defects and taking timely measures to ensure the safety and durability of transport infrastructure.	Electrical engineering and the basics of electronics, Electrotechnical calculations of construction facilities, Artificial structures on transport routes, Engineering transport structures, Production practice 1	IT in transport engineering, Maintenance and repair of railway lines, Maintenance and repair of highways, Occupational safety and health, Production practice 2/ Pre-graduate practice, Final certification
		Engineering structures monitoring systems				LO7	The discipline studies modern methods and technologies for monitoring the technical condition of engineering structures, including buildings, bridges and tunnels, covering types of sensors, data collection and transmission systems, as well as methods for analyzing and interpreting measurement results to identify defects, predict their development and ensure safe operation of facilities.	Electrical engineering and the basics of electronics, Electrotechnical calculations of construction facilities, Artificial structures on transport routes, Engineering transport structures, Production practice 1	IT in transport engineering, Maintenance and repair of railway lines, Maintenance and repair of highways, Occupational safety and health, Production practice 2/ Pre-graduate practice, Final certification

Infrastructure programs module / Additional educational program module									
PD	KV	BIM technologies in the construction of infrastructure facilities	90	3	7	LO3,7	The discipline studies BIM technologies (building information modeling) in the design, construction and operation of infrastructure facilities, the creation and management of information models, the collaboration of project participants in a single digital environment, as well as the use of BIM for analysis.	Engineering mathematics 1,2, Construction physics, Basics of Python programming, Information and communication technologies, Digital inclusion, Electrical engineering and the basics of electronics, Electrotechnical calculations of construction facilities, Engineering geodesy, Educational practice (geodetic), Bases and foundations, Geotechnics in foundation engineering, Fundamentals of transportation corridor design, Design and calculation of railway lines, Design and calculation of highways, Transport logistics, Interaction of modes of transport	Final certification, Basic and profile disciplines of the master's degree
		Minor program 1				LO3,7	The first of the three disciplines, which allows you to form additional professional competencies in various subject areas.	Engineering mathematics 1,2, Construction physics, Basics of Python programming, Information and communication technologies, Digital inclusion, Electrical engineering and the basics of electronics, Electrotechnical calculations of construction facilities, Engineering geodesy, Educational practice (geodetic), Bases and foundations, Geotechnics in foundation engineering, Fundamentals of transportation corridor design, Design and calculation of railway lines,	Final certification, Basic and profile disciplines of the master's degree

								Design and calculation of highways, Transport logistics, Interaction of modes of transport	
PD	KV	Regulatory and technical documentation in transport construction	90	3	8	LO8,9	The discipline studies a set of regulatory documents governing the design, construction and operation of transport facilities, building codes and regulations (SNiP), state standards (GOST), technical regulations and other guidelines. Particular attention is paid to the procedure for developing, coordinating and applying regulatory and technical documentation to ensure quality, safety and compliance with requirements in transport construction.	Professionally oriented foreign language, Fundamentals of transportation corridor design, Design and calculation of railway lines, Design and calculation of highways, Reconstruction of transport routes, Modernization of transport highways, Highway construction technology, Technological processes of highway construction, Transport logistics, Interaction of modes of transport	Maintenance and repair of highways, Production practice 2/ Pre-graduate practice, Final certification
		Minor program 2				LO8,9	The second of the three disciplines, which allows you to form additional professional competencies in various subject areas.	Professionally oriented foreign language, Fundamentals of transportation corridor design, Design and calculation of railway lines, Design and calculation of highways, Reconstruction of transport routes, Modernization of transport highways, Highway construction technology, Technological processes of highway construction, Transport logistics, Interaction of modes of transport	Maintenance and repair of highways, Production practice 2/ Pre-graduate practice, Final certification
PD	KV	The basics of cost accounting	90	3	9	LO6,9	The course studies the principles and methods of determining the cost of construction, reconstruction, and repair of facilities, covering regulatory frameworks, calculation of work volumes, material costs, labor wages, equipment operation, overheads, and profit, while developing	Green economy and sustainable entrepreneurship, Fundamentals of financial literacy, Managerial economics, Time-management, Fundamentals of transportation corridor design,	Final certification, Basic and profile disciplines of the master’s degree

							students' skills in preparing cost estimates, analyzing project costs, justifying investments, and controlling expenditures in construction projects.	Design and calculation of railway lines, Design and calculation of highways, Maintenance and repair of railway lines, Transport logistics, Interaction of modes of transport	
		Minor program 3				LO6,9	The third of the three disciplines, which allows you to form additional professional competencies in various subject areas.	Green economy and sustainable entrepreneurship, Fundamentals of financial literacy, Managerial economics, Time-management, Fundamentals of transportation corridor design, Design and calculation of railway lines, Design and calculation of highways, Maintenance and repair of railway lines, Transport logistics, Interaction of modes of transport	Final certification, Basic and profile disciplines of the master’s degree
		Total:	**2340**	**78**					

Head of the department of «Transport construction» **G.B. Karibaeva**