



THE CATALOG OF DISCIPLINES OF THE COMPONENT OF CHOICE

6B11326 - Organization of transportation, traffic and operation of transport

Education level: Bachelor's degree

Duration of study: 3 years

Year of admission: 2024

Module	Cycle	Component	Name of the discipline	Total labor intensity		Term	Learning outcomes	A brief description of the discipline	Prerequisites	Post-requirements
				in academic hours	in academic credits					
1	2	3	4	5	6	7	8	9	10	11
Module 5 – life skills module	GED	EC	Ecology and life safety	150	5	7	LO2, LO10	The discipline provides knowledge and ideas about environmental problems and approaches to solving them, sources and types of environmental pollution by enterprises, principles of regulating the quality of atmospheric air and water, the main provisions of legislation in various fields, on natural and man-made emergencies, their causes, methods of prevention and protection. Teaching methods – analysis of a specific situation (case-study), group discussions.	Ensuring traffic safety in transport	Labor protection, Transport security and train traffic management systems
			Methods of scientific research				LO1, LO12	The discipline provides knowledge and ideas about the content of scientific activity, its methods and forms of knowledge. The theoretical and applied knowledge obtained by students on the methods of scientific research of problems in the studied area, instills in future specialists the skills of cognitive activity in the field of science. Methods of active learning – group, scientific discussions, debate, project method.	Information and communication technologies, Basics of artificial intelligence	Prospects for the development of railway stations and hubs
			Economics and business activities				LO3	Studies the activities of enterprises in various types of market, the model of equilibrium and functioning of the market, government regulation of prices and tariffs. Examines the concepts of entrepreneurship and the limits of its legal regulation, the conditions for the development of entrepreneurship, organizational and legal forms of doing business, business planning, business secrecy, social responsibility of entrepreneurship.	Fundamentals of financial literacy, Critical thinking, Minor program	Final certification
			Fundamentals of law and anti-corruption culture				LO11, LO12	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, mechanisms for protecting legitimate human interests in case of violation. The discipline forms students' improvement of public and individual legal awareness and legal culture, as well as a system of knowledge and citizenship on combating corruption as an antisocial phenomenon. Methods of active learning – analysis of specific situations, brainstorming.	Sociology, Cultural studies, Political Science	Final certification

	BD	EC	Rolling stock and train traction	180	6	3	LO4	The study of the design, principles of operation, classification and technical characteristics of railway rolling stock, the basics of train traction, the organization of operation and maintenance of rolling stock. Formation of skills for the effective use of technical equipment of rolling stock traction of railway trains, taking into account the amount of work, performance of traction calculations and calculation of indicators of the use of rolling stock. Within the framework of the discipline, the development of individual projects is carried out.	Interaction of modes of transport, Transportation management	Special conditions of cargo transportation, Passenger transport complex, Rules of cargo transportation, Technology and management of railway sections and directions, Railway stations and junctions 1
			Operation of urban transport				LO4, LO8	The study of the principles of the organization of urban transport, the requirements for the transportation of passengers, baggage, cargo and cargo, the planning of urban transport complexes and the parameters of the interaction of modes of transport in a single urban transport system. Formation of skills for determining indicators, analyzing the state of transport security of cities and regions, determining the need for the development of the transport network, rolling stock, organization and technology of transportation. Interactive teaching methods are used: working in small groups, discussions, conducting guest lectures.	Interaction of modes of transport, Transportation management	Organization and management of passenger transportation
	BD	EC	Organization of the operational work of the railway section	180	6	6	LO7, LO9	Studying the issues of organizing the work of railway sections, dispatching personnel of railways, technical rationing of operational work and regulation of carriage flows, locomotive and carriage fleets, rationing of work and rest of locomotive crews. Formation of skills for determining the operated fleet and calculating the operational indicators of the use of locomotives, operational planning of train and freight work of the road. Within the framework of the discipline, video demonstration is practiced, field classes are organized on the basis of the Almaty branch of the railway, Almaty-1, Almaty-2 stations.	Railway design and operation, Ensuring traffic safety in transport	Technology and management of railway sections and directions, Technical regulation of the organization of transportation by rail
			Transport interchange hubs				LO4, LO8	Study of the principles of formation and development of transport interchange hubs (TIHs) in cities and agglomerations, their purpose and classification, requirements for territories and facilities of new passenger transport transfer hubs, their arrangement and elements of planning organization. Formation of skills for the development of planning systems of transport hubs and assessment of the quality of service for passengers and visitors of TIH. Within the framework of the discipline, students perform group tasks, work in small groups.	Design and operation of highways, Railway design and operation, Passenger transport complex	Railway stations and junctions 1, Railway stations and junctions 2, Prospects for the development of railway stations and hubs
	BD	EC	Transport and cargo systems	180	6	6	LO5, LO8	Study of the principles of organization of transport and cargo systems on various types of transport using modern and advanced cargo processing technologies. Formation of skills for developing optimal schemes for carrying out loading and unloading operations and warehouse operations with various cargoes with the rational use of the material and technical base in the logistics chain of cargo supply, as well as determining the storage conditions of various cargoes. The discipline provides for the performance of computational and graphical work.	Interaction of modes of transport, Educational practice, Special conditions of cargo transportation	Organization of cargo and commercial work, Foreign economic activity in transport, Transport support for international transportation

	BD	EC	Cargo management	180	6	5	LO5, LO8	Study of the properties of goods and conditions of their transportation, transport classification of goods, factors affecting the cargo, transport characteristics of goods affecting the organization of transportation, organization of measures to ensure safety during transportation and storage. Mastering the skills of assessing the quality of goods and methods of determining the impact of transport characteristics of goods on the organization of transportation. The discipline uses interactive teaching methods, the method of case studies.	Transportation management, Special conditions of cargo transportation	Terminal transport systems, Organization of cargo and commercial work, Transport support for international transportation, Foreign economic activity in transport
			Cargo packing service				LO5, LO8	Studying the properties of containers and packaging based on the characteristics, operating conditions and manufacturing; familiarization with the types of materials for the production of containers and packaging; obtaining information about the environmental aspect of packaging, packaging safety (environmental requirements). Formation of ideas about the technology of cargo handling in the warehouse, used containers and packaging, packages, as well as labeling. The discipline uses interactive teaching methods, the method of case studies.	Transportation management	Terminal transport systems, Organization of cargo and commercial work, Transport support for international transportation
Module 9 – Model of economic and managerial competencies	BD	EC	Managerial economics	90	3	7	LO3	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 tasks facing the head of the company. Studying this discipline will allow students to gain and develop knowledge in the field of analytical research of economic, technological and technical parameters of an enterprise, as well as to master the skills of using special methods of economic justification of management decisions and assessment of their consequences.	Minor program 2, Fundamentals of financial literacy	Prospects for the development of railway stations and hubs
			Time management				LO11	The discipline studies a system of methods, tools and approaches that are aimed at effective time management in order to achieve the tasks set. It is designed to improve the skills of organizing and optimizing the use of working time, increase work productivity, reduce stress, planning, delegation, use of tools and technologies, as well as know your time and energy rhythms in order to effectively use your time.	Minor program 1	Organization and management of high-speed rail transport
	BD	EC	Fundamentals of financial literacy	90	3	5	LO3	Formation of general functional economic and financial literacy, mastering methods and tools of economic and financial calculations for solving practical problems.	Minor program 1	Economics and business activities, Foreign economic activity in transport, Managerial economics
			Critical thinking				LO11	The discipline studies the forms and techniques of rational cognition, the creation of a general idea of logical methods and approaches used in the field of professional activity, the formation of practical skills of rational and effective thinking.	Minor program 1	Economics and business activities

Module 7 – Professional Module	PD	EC	Passenger transport complex	180	6	5	LO4, LO7, LO8	The study of the theoretical and practical provisions of the functioning of passenger complex systems, taking into account the interaction of various modes of transport and planning features of cities, agglomerations, regions. Consideration of issues related to the development of passenger transport infrastructure that meets modern requirements. Obtaining skills in organizing high-quality passenger service at transport facilities and monitoring the compliance of the quality of services provided with established requirements. Within the framework of the discipline, classes are conducted with departure to the railway station complexes of Almaty-1, Almaty-2.	Operation of urban transport, Organization and management of passenger transportation	Transport interchange hubs
			Rules of cargo transportation				LO5, LO8	Study of the basics of planning freight transportation in direct rail transport, as well as export and import cargo, rules for receiving and issuing goods, sealing wagons and containers, transportation of bulk goods by routes, goods with declared value. Obtaining skills in documenting the technology of transportation of various goods by rail. The training is conducted with elements of dual education on the basis of transport enterprises.	Rolling stock and train traction	Organization of cargo and commercial work
	PD	EC	Special conditions of cargo transportation	180	6	4	LO5, LO8	Studying the principles of organizing the transportation of perishable and dangerous goods in wagons and containers, taking into account the optimization of technical and technological processes of cargo delivery. Acquisition of skills in determining the most optimal schemes for performing loading and unloading and storage operations with perishable and dangerous goods, as well as training rolling stock. As part of the discipline, field classes are held at transport facilities.	Rolling stock and train traction	Cargo management, Transport and cargo systems, Organization of cargo and commercial work, Transport support for international transportation
			Industrial transport technology				LO5, LO8	The study of the role of industrial transport in the process of public production, taking into account the interaction of industries and mainline transport, regulatory and legal interaction of industrial and mainline transport. Formation of planning and forecasting skills in industrial transport, development of a unified technological process for industrial and mainline railway transport. The discipline provides for the development of individual projects.	Interaction of modes of transport	Terminal transport systems
Module 9 is a practice-oriented			Transport security and train traffic management systems	180	6	9	LO2, LO10	The study of terms and definitions in the field of technical operation of transport and traffic safety, regulatory documents regulating the technical operation of transport and traffic safety, standards of technical operation on the device, maintenance and operation of technical means to ensure traffic safety. Acquisition of skills for determining permissible traffic safety violations. As part of the study of the discipline, guest lectures are given by leading top managers of transport companies, solving and analyzing situational problems.	Ensuring traffic safety in transport, Production practice 1, Technology and management of railway sections and directions, Organization and management of high-speed rail transport, Technical regulation of the organization of transportation by rail, Railway stations and junctions 1	Production practice 2, Final certification

module			Prospects for the development of railway stations and hubs			LO4, LO6	Study of issues of ensuring the modern level of development of railway transport infrastructure in accordance with international standards. The use of innovative methods for calculating the technical equipment of stations, railway sections and nodes to ensure the specified and prospective dimensions of transportation, passage and processing of heavy freight and high-speed trains. Development of projects of stations and nodes according to rational schemes, their integrated development taking into account the achievements of modern science, improvement of their technology based on automation and informatization of production processes.	Information and communication technologies. The basics of artificial intelligence, Transport interchange hubs, Methods of scientific research, Managerial economics, Minor program 3, Organization and management of high-speed rail transport, Railway stations and junctions 1	Production practice 2, Final certification
Total volume (variable part)				1950	65				

Head of the Department of OTOT



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