



Director of the Container Department
Limited liability partnership «Kemer Logistics»
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Мұхаметжан Тынышбаев атындағы АЛТ университеті» АҚ
ЛОГИСТИКА ЖӘНЕ БИЗНЕС ИНСТИТУТЫ
Director of the Institute "LB"
ИНСТИТУТ ЛОГИСТИКИ И БИЗНЕСА
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THE CATALOG OF DISCIPLINES OF THE COMPONENT OF CHOICE

EDUCATIONAL PROGRAM

6B07185 - Railway transport logistics systems management

Education level: Bachelor's degree

Duration of study: 3 years

Year of admission: 2025

Cycle	Component	Name of discipline	Total labor intensity		Semester	Learning outcomes	Brief description of the discipline	Prerequisites	Post-requirements
			in academic hours	in academic credits					
1	2	3	4	5	6	7	8	9	10
GED	EC	Environmental ly Sustainable Technologies	150	5	6	LO4	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.	Disciplines of the school component	Occupational safety and health
		Green economy and sustainable entrepreneurship				LO5	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 markets.	Engineering Mathematics 1,2	Managerial Economics, Time Management
		Fundamentals				LO5	The discipline is aimed at developing the ability to make	Engineering	Managerial

		of financial literacy					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.	Mathematics 1,2	Economics, Time Management
							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.		
		Digital inclusion				LO3		Disciplines of the school component	Occupational safety and health
		Basics of law and anti-corruption culture				LO1	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 awareness and legal culture, as well as a system of knowledge and citizenship on combating corruption as an antisocial phenomenon.	Disciplines of the school component	Customs Clearance of Cargo
		Fundamentals of Scientific Research				LO3	The discipline is aimed at developing students' skills in conducting scientific research, analyzing information, and presenting results in an academic form. It covers the basic concepts of scientific activity, types and stages of research, methods of data collection and processing, rules for formatting scientific papers, requirements for the structure and style of publications, as well as the fundamentals of academic ethics and citation.		
BD	EC	Analysis and Forecasting of Freight Flows	180	6	4	LO9	Methods of analyzing and forecasting freight flows on railway transport are studied using statistical, econometric-mathematical, and digital models. Special attention is given to assessing the transport structure, identifying trends, and justifying logistics decisions for effective management of freight flows.	The general course of transport, Interaction of modes of transport	Supply Chain Management, Strategic Logistics Management in Railway Transport

		Modeling and Optimization of Logistics Processes in Railway Transport				LO9	Methods of modeling and optimizing logistics processes in railway transport are studied using modern digital and mathematical tools. Special attention is given to building logistics chain models, analyzing efficiency, managing resources, and making decisions under uncertainty.	Interaction of modes of transport, Transport and logistics systems	Supply Chain Management, Intelligent Freight Transport Management Systems in Railway Transport
		Rules for the transportation of goods by rail				LO8	The discipline is dedicated to the study of the regulatory and legal framework governing the organization and execution of freight transportation by rail. The course covers the rights and obligations of transportation participants, procedures for preparing transport documents, requirements for loading, securing, and unloading cargo, as well as liability for violations of transportation rules.	The general course of transport, Modern Rolling Stock and Traction Means of Railways	Logistics of specialized transport, Freight and commercial work in railway transport
BD	EC	Documentation Support of Freight Transportation	180	6	4	LO8	The rules and technologies for processing transport, commercial, and accompanying documentation in the organization of freight transportation by rail are studied. The course covers the regulatory framework, information systems, digital formats, and control of document flow accuracy in logistics processes.	Commercial Operation of Railway Transport	Freight and commercial work in railway transport
BD	EC	Marketing and Sales of Transport Services	210	7	8	LO10	The fundamentals of marketing and sales organization of transport services in railway transport are studied. The course covers demand analysis, service offering development, pricing, service promotion, customer interaction, and the use of digital tools to enhance the competitiveness of transport and logistics companies.	Fundamentals of financial literacy, Green economy and sustainable entrepreneurship, Managerial Economics	Customs Clearance of Cargo
		Transport Risk Management				LO9	Types and methods of risk management in freight transportation by rail are studied. This includes the identification, assessment, monitoring, and mitigation of risks related to transportation, infrastructure, technologies, and the external environment using modern management and analysis tools.	Rules for the transportation of goods by rail, Analysis and Forecasting of Freight Flows	Intelligent Technologies for Transport Hub Operations, Customs Clearance of Cargo
BD	EC	Intelligent Technologies for Transport Hub	150	5	9	LO3	Intelligent technologies for optimizing the operation of transport hubs, automating processes, and increasing their efficiency are studied. Methods of data analysis, modeling, and automatic control used in railway logistics are	Applied Artificial Intelligence in Transport Systems, Intelligent Freight	Final Certification

		Operations					considered to improve productivity, reduce costs, and ensure the uninterrupted operation of transportation systems.	Transport Management Systems in Railway Transport	
		Information Technologies in Logistics and Transport Management				LO3	Modern information technologies used in logistics and railway transport management are studied. The course covers automated control systems, digital platforms, software solutions for monitoring, planning, and optimizing logistics processes, as well as issues of IT integration into transport infrastructure.	Information and Communication Technologies	Final Certification
							Formation of the conceptual apparatus and development of		
BD	EC	Managerial Economics	90	3	6	LO5	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.	Fundamentals of financial literacy	Marketing and Sales of Transport Services
		Time - management				LO5	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.	Basics of law and anti-corruption culture	Transport Risk Management
PD	EC	Applied Artificial Intelligence in Transport Systems	180	6	7	LO3	The discipline is aimed at forming ideas about modern approaches and technologies of artificial intelligence (AI) used in the field of transport and logistics. The course examines the basic algorithms of machine learning, data mining and decision-making used to optimize transport processes.: flow management, demand forecasting, routing, maintenance, monitoring, and security. Special attention is paid to the use of AI in the automation of transport systems, intelligent transport platforms, unmanned and autonomous vehicles, as well as the digitalization of logistics chains.	Information and Communication Technologies	Intelligent Technologies for Transport Hub Operations, Information Technologies in Logistics and Transport Management
		Intelligent				LO3	The course focuses on the principles of development and	Information and	Intelligent

		Freight Transport Management Systems in Railway Transport					operation of intelligent freight transport management systems in railway transport. It covers digital technologies, decision-making algorithms, process automation, and monitoring systems that enhance the efficiency, safety, and sustainability of logistics operations amid the digital transformation of the industry.	Communication Technologies	Technologies for Transport Hub Operations, Information Technologies in Logistics and Transport Management
							The course covers the organization, legal regulation, and logistical support of international transport operations. Students study the specifics of various modes of transport, documentation procedures, customs processes, international agreements, and standards. Special attention is given to selecting optimal routes along international transport corridors, managing supply chains, and coordinating stakeholders in foreign economic activities to ensure the efficiency and security of international transportation.	Commercial Operation of	Freight and commercial work in railway transport, Customs Clearance of Cargo
PD	EC	Transport Support of International Transportation	150	5	7	LO11	Logistics technologies for freight delivery using railway transport are studied, including methods of route planning and optimization, selection of transport vehicles, interaction between different modes of transport, digital management tools, and ways to improve the efficiency and reliability of logistics operations in freight transportation.	Railway Transport , Organization of Freight Transportation by Railway Transport	Transport Risk Management, Container Transportation Technologies
		Logistics Technologies for Cargo Delivery				LO11	The discipline is devoted to the study of modern technologies and methods of organizing the operation of various types of transport terminals. The course examines the issues of planning, organization and management of technological processes at terminals, as well as ensuring the safety and efficiency of their operation. The purpose of the course is to develop a comprehensive understanding of the principles of organization and management of technological processes at transport terminals, as well as practical skills in applying modern methods and technologies to improve the efficiency and safety of their work.	Transport and logistics systems, Modeling and Optimization of Logistics Processes in Railway Transport	Final Certification
PD	EC	Technology of operation of transport terminals	150	5	9	LO7	The course explores advanced methods of organizing and managing containerized freight transportation. Students learn the principles of containerization, types and standards of containers, as well as technologies for cargo handling	Commercial Operation of Railway Transport , Organization of Freight Transportation by Railway Transport	Final Certification
		Container Transportation Technologies				LO11		Commercial Operation of Railway Transport , Organization of	Final Certification

							and movement. The course covers multimodal transport schemes, digital management tools, automation of container terminals, and international regulations and trends in the development of global container logistics.	Freight Transportation by Railway Transport	
PD	EC	Minor program 1 WMS Systems and Digital Warehouse Management	90	3	7	LO10	Course "WMS Systems and Digital Warehouse Management" focuses on modern technologies for automating warehouse processes. Students learn the principles of Warehouse Management Systems (WMS), methods of digital inventory control, and optimization of storage and cargo handling. Special attention is given to integrating WMS with transport logistics to improve warehouse efficiency and reduce costs in supply chains.	Organization of Freight Transportation by Railway Transport	Automation of logistics processes (RFID, IoT, sensor networks), Freight and commercial work in railway transport
PD	EC	Minor program 2 Automation of logistics processes (RFID, IoT, sensor networks)	90	3	8	LO7	The discipline is devoted to the study of modern technologies for automatic identification, data collection and transmission, used to optimize and automate logistics processes in supply chains. The course examines the principles of RFID, IoT (Internet of Things) and sensor network technologies, as well as their application for monitoring, managing and controlling the movement of goods, transport and personnel in logistics systems. The aim of the course is to develop a comprehensive understanding of the principles of operation and application of RFID, IoT and sensor network technologies for automation of logistics processes, as well as practical skills in designing, implementing and operating automated logistics systems.	Logistics of Warehousing and Cargo Handling	Container Transportation Technologies. Technology of operation of transport terminals
PD	EC	Minor program 3 Customs Clearance of Cargo	90	3	9	LO11	The course covers the basic principles and procedures of cargo customs clearance. Students learn the legislation, documentation, and technologies necessary for effective customs control and processing. Special attention is given to optimizing processes, reducing the risk of delays, and complying with international standards in transport logistics.	Organization of Freight Transportation by Railway Transport	Final Certification

Head of the Department of Transport Services and Business

Mussaliyeva R.D.