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«_19_» __03__ 2025 y.

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

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