

«Mukhametzhan Tynyshbayev ALT University» JSC

I APPROVE
Chairman of the «ALT University» JSC
 **M.S. Zharmagambetova**

Decision of the Academic Council of
«ALT University» JSC
from April 30, 2026 (protocol No. 8)

THE PROGRAM OF THE ENTRANCE EXAM TO THE DOCTORAL
PROGRAM scientific and pedagogical direction

D11362 - Logistics (by industry)
by educational program groups "D148 Logistics (by industry)"

Almaty, 2026

Entrance exam program discussed and received a positive decision at a meeting of the Department of Transport Services and Business, protocol No. 7 dated March 20, 2026.

Head of the Department



Mussaliyeva R.D.

The entrance exam program was reviewed and recommended at a meeting of the Council of the Institute of Logistics and Business, minutes No. 8 of April 21, 2026.

Chairman of the Institute Council



Daubaev K.Zh.

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1. PURPOSE OF THE ENTRANCE EXAMINATION

The purpose of the entrance examination is to assess the applicant's level of theoretical and practical preparation and to evaluate whether their knowledge, skills, and competencies meet the admission requirements for the selected field of doctoral study.

The entrance examination for the **Doctor of Philosophy (PhD)** program consists of the following components: an interview with the applicant conducted by the Examination Committee; writing an essay; answering examination questions relevant to the profile of the Group of Educational Programs.

2. FORMAT AND REGULATIONS OF THE ENTRANCE EXAMINATION

The total duration of the entrance examination is **3 hours and 30 minutes**. During this period, the applicant shall: participate in an interview with the Examination Committee; write an essay; answer an electronic examination ticket consisting of **three questions**.

The examination questions and the essay topic are generated randomly.

The maximum score for the entrance examination is **100 points**, distributed as follows:
Essay – **20 points**; Examination in the profile of the Group of Educational Programs – **50 points**;
Interview – **30 points**.

3. TYPES AND EVALUATION CRITERIA

3.1 Types and criteria of essay evaluation

Types of essays	Description	The volume of the essay
Motivational	The applicant's justification of the motivation for pursuing research activities (Research Statement).	At least 250 words
Scientific analytical and	The applicant's justification of the relevance, objectives, and research methodology of the proposed study (Research Proposal).	
Problem-themed	Presentation and substantiation of the applicant's own position on current issues within the relevant field of study/	

Criteria	Descriptors	Scores
Depth of topic disclosure	The problem is disclosed on a theoretical level, with the correct use of scientific terms and concepts, using information from various sources.	4
	his own point of view (position, attitude) is presented when solving the problem.	4
Argumentation, evidence base	the presence of arguments, the identification of cause-effect relationships, the ability to reason from the particular to the general, from the general to the particular.	4
Compositional integrity and logic of presentation	The presence of compositional integrity, the logical connection of the structural components of the essay, the presence of conclusions and generalizations	4
Speech culture	demonstration of an advanced level of academic writing (vocabulary, knowledge of scientific terminology, grammar, stylistics)	4
Maximum number of points		20

3.2 Criteria for evaluating the answers to the questions of the electronic examination card

The exam in the profile of the group of educational programs includes 3 blocks of questions, of which: the 1st question determines the level and consistency of theoretical knowledge; the 2nd question reveals the degree of formation of functional competencies; the 3rd question is aimed at determining systemic competencies. The maximum number of points is 50.

The electronic exam ticket consists of 3 questions:

Blocks	The nature of the question	Number of points
1st question	theoretical -determines the level and consistency of theoretical knowledge	10
2nd question	practical - reveals the degree of formation of functional competencies (the ability to apply techniques, technologies and techniques in the subject area)	20
The 3rd question	it reveals a systematic understanding of the subject area under study, specialized knowledge in the field of research methodology (system competencies)	20
TOTAL		50

Criteria for evaluating the answers to the questions of the electronic examination card:

Question	Evaluation criteria	Number of points
1st question	demonstrates knowledge of the main processes of the subject area under study; the depth and completeness of the disclosure of the issue	5
	logically and consistently expresses his own opinion on the issue under discussion	3
	knows the conceptual and categorical apparatus, scientific terminology	2
TOTAL		10
2nd question	applies methods, techniques, and technologies to solve problems in the subject area	7
	argues, compares, classifies phenomena, events, processes; draws conclusions and generalizations based on practical skills	7
	analyzes information from various sources	6
TOTAL		20
The 3rd question	critically analyzes and evaluates theoretical and practical developments, scientific concepts and current trends in the development of science	7
	synthesizes methodological approaches in the interpretation of the main problems of subject knowledge	7
	identifies cause-and-effect relationships in the analysis of processes, phenomena, events	6
TOTAL		20
In total		50 points

3.3 Interview evaluation criteria

№	Criteria	Descriptors	Points
1.	Motivation	Argumentation of motives for studying for a doctoral degree in a selected OP and admission to a certain university. Vision of prospects for professional and personal growth upon completion of training.	5
2	Research competence	Possession of research skills and experience necessary for research activities in a specific subject area.	10
3.	Creativity	Non-standard thinking, creative and alternative approaches to solving problems, situational tasks.	10
4.	Communicativeness	The ability to briefly, representatively, logically, argumentatively state your point of view, make generalizations and conclusions. Language proficiency.	5
Maximum number of points			30

4. CONTENT OF EXAMINATION MATERIALS

4.1 Content of the Essay topic

№	The topic of the essay
1	Modern Logistics in the Context of Global Change: Challenges, Adaptation Mechanisms, and Development Prospects.
2	Digital Transformation of Logistics: The Impact of Digital Technologies on the Efficiency of Freight Transportation.
3	Selecting an Optimal Logistics Scheme for Freight Delivery under Modern International Trade Conditions.
4	Digital Twins as a Tool for Enhancing the Efficiency of Logistics and Transportation Management.
5	Green Logistics as a Driver of Sustainable Economic Development: Current Trends and Future Prospects.
6	The Application of Green Technologies in Enterprise Logistics: Benefits and Implementation Challenges.
7	Automation of Transport and Warehouse Operations as a Factor in Improving the Efficiency and Competitiveness of Logistics Systems.
8	Transport Infrastructure of the Republic of Kazakhstan: Current State, Challenges, and Development Prospects.
9	Containerization of Freight Transportation as a Driver for the Development of Kazakhstan's Transport and Logistics Sector.
10	The Caspian Region in the System of International Transport Corridors: Opportunities, Challenges, and Development Prospects.
11	International Transport Corridors as the Foundation for Developing the Transit Potential of the Republic of Kazakhstan.
12	Artificial Intelligence and Big Data in Logistics: Opportunities, Risks, and Future Prospects.

13	The development of e-commerce and its impact on modern logistics systems.
14	Supply chain management in the face of global instability and economic risks.
15	Innovative technologies in transport logistics: unmanned vehicles, robotization and automation.
16	Logistics centers and transport and logistics hubs as drivers of economic development of regions.
17	Management of logistics risks in the organization of international transportation of goods.
18	Prospects for the development of multimodal transportation in the Republic of Kazakhstan and their importance for international logistics.
19	The impact of digitalization of customs procedures on the efficiency of international freight transportation.
20	The profession of a logistician in the era of the digital economy: competencies, professional challenges and career development prospects.

4.2 The content of the sections by blocks submitted to the entrance exam

Examination materials for entrance exams to doctoral studies in groups of educational programs that include the topic of essays, exam questions in the profile are made in three languages: in Kazakh, Russian and English.

The topics of the exam questions correspond to selected sections from the curricula of the cycles provided for groups of educational programs "**D148 Logistics (by industry)**"

№	Name of disciplines
1	Logistic analysis of the activities of transport enterprises
2	Market research of transport and logistics services
3	International transport corridors and logistics centers
4	Supply Chain Logistics Risk Management
5	Strategic management and innovation in supply chains

Block 1. Systematic Theoretical Knowledge in Logistics

Introduction, history of development, the concept of logistics as a system. Approaches to solving problems taking into account a comprehensive analysis of the entire supply chain. The main components of the logistics system. Goals and objectives of the logistics system. Application of mathematical models, management theory, optimization theory for the analysis and improvement of logistics processes. International logistics operations, adapting standard methods to different countries, legal regulations, currency risks and cultural differences. Formation of logistics management structures when choosing an organizational model that optimally meets the company's goals and market characteristics

Block 2.2. Methods and models of practical implementation of logistics (by industry)

Introduction to Mathematical Modeling of Traffic Flows. Efficiency of Transport Support of Logistics Chains. Collaborative technologies for planning, forecasting, and replenishing supply chains. The Whiplash Effect in Supply Chains and the Problem of Sustainability. The Model of Material Flow Service with the Participation of Distribution Centers. Logistic Approach to the Organizational and Economic Design of Supply Chain Links. Project Management. Forwarding

Block 3. Research methodology and integrated planning of work in logistics.

A comprehensive study of the essence and factors that determine the unity of the transport system. Principles of modeling the work of transport and logistics complexes. Interaction processes in transport hubs. The main characteristics of the quality of the functioning of transport hubs. Comprehensive assessment of the national market of transport services. Globalization of international economic relations on the Eurasian continent. Reasons for the emergence and justification of new transit corridors on a global scale. Development of the transit and transport potential of the Republic of Kazakhstan. Modeling the interaction of logistics processes. International requirements for freight forwarding services for international transportation.

4.3 List of interview questions

1. Tell us about the proposed topic of your scientific research. What is its relevance and practical significance for the development of the transport and logistics industry?
2. What scientific research methods do you plan to use for your master's thesis? Justify their choice.
3. What modern problems of international logistics require scientific research and innovative solutions?
4. What factors have the greatest impact on the development of international supply chains in today's geo-economic environment?
5. What role do digital technologies, artificial intelligence and big data play in the development of international logistics and supply chain management?
6. For the solution of which logistics problems is the use of artificial intelligence in transport and logistics activities most effective?
7. How does digital transformation affect the efficiency of international transportation and the management of logistics processes?
8. Reveal the features of the development of the transport and logistics system of the Republic of Kazakhstan and its integration into the global transport network.
9. What role does the Republic of Kazakhstan play in the development of international transport corridors and global supply chains?
10. What is the importance of international transport and logistics hubs for the development of world trade and the transit potential of states?
11. What benefits does Kazakhstan receive from the development of transport and logistics hubs and multimodal logistics centers?
12. What modern competencies do a logistician need to work effectively in international transport and logistics companies?
13. Reveal the essence of insourcing and outsourcing of logistics services. What factors should be considered when choosing a logistics management model?
14. What international transport documents are used in the organization of export-import transportation? What is their role in ensuring international trade?
15. What is an international supply chain? Name its main participants and explain the principles of their interaction.
16. How do digital platforms contribute to the integration of supply, production, warehousing, transportation and distribution of products in international supply chains?
17. What is the essence of business process reengineering in logistics? What benefits does it provide to transport and logistics companies?
18. What modern information systems, digital platforms and CASE technologies are used to model and manage logistics business processes?

19. What innovative technologies are used in the activities of modern transport and logistics hubs and multimodal terminals?
20. Reveal the features of cargo insurance for international transportation. What risks are covered by international cargo insurance?
21. What are the advantages and limitations of different modes of transport in the organization of international freight transportation?
22. What role does multimodal transportation play in the development of international logistics and international transport corridors?
23. What factors determine the competitiveness of a transport and logistics hub in the international logistics services market?
24. What are the main principles of sustainable ("green") logistics and how are they implemented in international transport and logistics practice?
25. How do you assess the prospects for the development of international logistics in the Republic of Kazakhstan in the context of expanding transit potential, the development of transport and logistics hubs and the digitalization of global supply chains?

5. RECOMMENDED LITERATURE

5.1 Basic Literature

1. Izteleuova M.S. Freight Forwarding: A Textbook / [and others]. - Almaty: ALiT, 2021.- 338 p.
2. B.A. Anikin Logistics: Textbook / Ed. by B.A. Anikin, T.A. Rodkina. - Moscow: Prospekt, 2020. - 408 p.
3. Musalieva, R.D. Interaction of types of transport: a textbook / R.D. Musalieva.- Almaty: KazATK, 2017.- 204p. Sergeev V.I. Logistics. Theory and Practice of Supply Chain Management. - Moscow: Yurayt, 2022.
4. Economic and Mathematical Methods and Models in Logistics: A Textbook / O.F. Bystrov [i dr.]. - Almaty, 2015.- 128 p.
5. Karsybayev, E.E. Vehicles in logistics/ E.E.Karsybayev.- Almaty: LANTAR BOOKS, 2025.- 206p. Anikin B.A. Logistics: A Textbook. Moscow: INFRA-M, 2023
6. Afonichev R.Yu., Tikhonova N.A., Shakhov V.G. Information Technologies in Logistics: A Textbook. - Moscow: FSBI DPO "Educational and Methodological Center for Education on Railway Transport", 2018. - 196 p.
7. Syrtanov S.A. Transport Systems and Processes. Human Resources and Competitiveness of Transport Enterprise: Textbook / S.A. Syrtanov. - Almaty, 2016. - 94 p.
8. Ivanov G.G., Kireeva N.S. Sklads kaya logistika: uchebnik dlya vuzov [Warehouse logistics: a textbook for higher education institutions]. - M.: FORUM: INFRA-M, 2016.- 192 p.
9. Gerami V.D. Management of transport systems. Transport support of logistics: Textbook and workshop / V.D. Gerami, A.V. Kolik.- Moscow: Yurayt Publishing House, 2016. - 438 p.
10. A.S. Balalaev. Terminal and Logistic Complexes: A Textbook / A.S. Balalaev, R.G. Korol. - Moscow: FSBI DPO "Educational and Methodological Center for Education on Railway Transport", 2018. - 156 p.
11. Zhanbirov Zh.G., Badambaeva S.E. Transport and Logistics Centers and Terminal Technologies: Textbook for Students of Higher Educational Institutions, 1 volume/, Zhanbirov Zh.G.- Almaty: Evero, 2024 -240 p
12. Zhanbirov Zh.G., Badambaeva S.E. Transport and Logistics Centers and Terminal Technologies: Textbook for Students of Higher Educational Institutions II Volume /, Zhanbirov Zh.G. - Almaty: Evero, 2024 -284 p
13. Transport Logistics in the Supply Chain: A Textbook. - Moscow: Federal State Budgetary Institution of Additional Professional Education "Educational and Methodological Center for Education on Railway Transport". - 2018. - 144 p.
14. Balalaev A.S., Garlitskiy E.I. Tekhnologiya raboty operatorskikh i ekpeditorskikh kompaniy: uchebnoe posobie [Technology of Operator and Forwarding Companies: A Textbook]. - Moscow: FSBI DPO "Educational and Methodological Center for Education on Railway Transport", 2018. - 134 p.
15. Suleimenov T.B., Transport Logistics. Astana, 2012, - 211 p., ill. www.enu.kz

5.2 Additional Literature

1. Nerush Y.M. Logistics: Theory and Practice of Design: Textbook and Practicum. Nerush Yu.M., Panov S.A., Nerush A.Yu. - Moscow: Yurayt, 2019. - 422 p.
2. Stepanov V.I. Logistics: Textbook / V.I. Stepanov. - Moscow: Prospekt, 2016.- 488 p.
3. A.M. Gadzhinsky Logistics. Moscow: Publishing and Trade Corporation "Dashkov and K" - 2016. - 308 p.
4. Miloslavskaya S.V., Pochaev Yu.A. Transport Systems and Transportation Technologies: Textbook. - M.: INFRA-M, 2017.- 116 p.
5. Troitskaya N.A., Shilimov M.V. Transport and Technological Schemes of Transportation of Certain Types of Cargo: A Textbook. - Moscow: KNORUS, 2016.- 232 p.

6. Stock J.R., Lambert D.M. Strategic Logistics Management (translated from English). – Moscow: INFRA-M.