

«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)

ENTRANCE EXAMINATION PROGRAM
for the Professional Doctoral Program

D11366 – Logistics (by Industry)
for the Group of Educational Programs "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:

1. an interview with the applicant conducted by the Examination Committee;
2. responses to examination questions relevant to the profile of the Group of Educational Programs;
3. submission of a letter of recommendation from an enterprise or organization.

2. FORMAT AND REGULATIONS OF THE ENTRANCE EXAMINATION

The total duration of the entrance examination is 2 hours and 30 minutes. During this period, the applicant shall participate in an interview with the Examination Committee; answer an electronic examination ticket consisting of three questions.

The examination questions are generated randomly.

The maximum score for the entrance examination is 80 points, distributed as follows: Examination in the profile of the Group of Educational Programs – 50 points; Interview – 30 points.

3. TYPES AND EVALUATION CRITERIA

3.1 Assessment Criteria for Responses to the Electronic Examination Ticket Questions

The examination in the profile of the Group of Educational Programs consists of three questions: Question 1 assesses the level and systematic nature of the applicant's theoretical knowledge. Question 2 evaluates the level of functional competencies. Question 3 assesses the applicant's system-level competencies, including the ability to analyze, integrate knowledge, and solve professional problems. The maximum score for this component is 50 points.

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

3.2 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

3.3 Letter of Recommendation from an Enterprise or Organization

For admission to the Professional Doctoral Program, the letter of recommendation from an enterprise or organization must be issued on the organization's official letterhead, contain specific and well-founded information, and confirm the organization's interest in the applicant's doctoral studies as well as its intention to apply the expected research outcomes in industrial or professional practice.

4. CONTENT OF EXAMINATION MATERIALS

4.1 The content of the sections on the blocks submitted for the entrance exam

Examination materials for the entrance exams to the doctoral program for groups of educational programs, including the subject of essays, examination questions on the profile are made in three languages: Kazakh, Russian and English.

The topics of the examination questions correspond to selected sections from the study programs of the cycles provided for in the group of the Educational program "D148-Logistics (by industry)":

№	Name of disciplines
1	Logistics analysis of the activities of transport enterprises
2	Transport and logistics services market research
3	International transport corridors and logistics centers
4	Logistics risk management in supply chains
5	Strategic management and innovation in supply chains
6	Automation/robotization of logistics processes

4.2 The content of the sections on the blocks submitted for the entrance exam

Block 1

1.1 Systematic Nature of Theoretical Knowledge in Logistics

Introduction, history of development, the concept of logistics as a system. Approaches to problem-solving based on comprehensive analysis of the entire supply chain. Key components of a logistics system. Goals and objectives of logistics systems. Application of mathematical models, control theory, and optimization theory for the analysis and improvement of logistics processes.

1.2 Approaches to the Formation of Logistics Management Structures

Transport logistics management, including planning, organizing, and controlling freight transportation to ensure timely and cost-effective delivery. International logistics operations and the adaptation of standard methods considering the specifics of different countries, legal regulations, currency risks, and cultural differences. Formation of logistics management structures through the selection of an organizational model that best fits the company's goals and market characteristics.

Block 2

2.1 Methods and Models of Practical Implementation of Logistics (by Industry)

Introduction to mathematical modeling of transport flows. Efficiency of transport support within logistics chains. Integrated technologies for planning, forecasting, and inventory replenishment in supply chains. The "bullwhip effect" in supply chains and the issue of system stability. A model for servicing material flows involving distribution centers.

2.2 Integrated Planning of Supply Chains

A logistics-based approach to the organizational and economic design of supply chain links. Project management. Forwarding operations of road transport companies. Risk management systems in transport enterprises.

Block 3

3.1 Research Methodology and Comprehensive Work Planning in Logistics

Comprehensive study of the nature and factors determining the unity of the transport system. Principles of modeling the operation of transport and logistics complexes. Interaction processes within transport hubs. Key performance indicators of transport hub functionality. Comprehensive assessment of the national transport services market.

3.2 Development of the Transit Potential of the Republic of Kazakhstan in the Field of Transcontinental Transportation

Globalization of international economic relations on the Eurasian continent. Causes and justification for the emergence of new global transit corridors. Development of the transit and transport potential of the Republic of Kazakhstan. Modeling interactions within logistics processes. International requirements for freight forwarding services in international transportation.

4.3 Interview questions

1. Justify the relevance of your proposed applied research and its expected practical impact on the transport and logistics industry.
2. What operational challenges in logistics require the implementation of innovative technological solutions? Provide examples.
3. Propose a project for the digital transformation of logistics processes in a transport and logistics company.
4. Which digital technologies (Artificial Intelligence, Internet of Things (IoT), Big Data, Blockchain, and Digital Twins) should be implemented to improve the efficiency of logistics processes?
5. Propose approaches to optimizing transport and logistics processes using intelligent information systems.
6. How can experimental research be applied to evaluate the effectiveness of logistics technologies and business processes?
7. Propose a methodology for assessing the effectiveness of implementing digital solutions in the operations of a transport and logistics enterprise.
8. Develop recommendations for improving the operational efficiency of a transport and logistics hub under conditions of increasing international freight traffic.
9. Which innovative technologies should be introduced into the operations of transport and logistics centers and multimodal terminals?
10. Justify the role of international transport corridors in the development of the transport and logistics infrastructure of the Republic of Kazakhstan.
11. Propose measures to enhance the transit potential of the Republic of Kazakhstan through the development of transport and logistics hubs.
12. Which digital tools can improve the efficiency of international freight transportation and supply chain management?
13. Propose measures to improve the organization of multimodal transportation in the Republic of Kazakhstan.
14. Which modern automation technologies for transport and warehouse operations are most in demand in the logistics industry?
15. Develop recommendations for implementing the principles of sustainable (green) logistics in the operations of a transport and logistics enterprise.

16. Propose methods for minimizing logistics risks in international freight transportation.
17. Which modern methods of business process modeling and optimization are applied in the design of logistics systems?
18. What opportunities do Digital Twins provide for modeling transport and logistics infrastructure?
19. Propose measures to improve the digitalization of customs procedures and international trade documentation.
20. How does the development of e-commerce influence the design of modern logistics systems? Propose practical solutions.
21. Which key performance indicators (KPIs) should be used to evaluate the performance of a transport and logistics center or logistics hub?
22. Propose an innovative project for the development of regional transport and logistics infrastructure based on international best practices.
23. Which mechanisms for the commercialization of scientific research in logistics do you consider the most effective?
24. What experimental facilities, digital technologies, and industrial platforms do you plan to use in conducting your doctoral research?
25. Present the concept of your own applied research project aimed at solving a current industrial challenge in logistics, specifying its expected scientific contributions and practical outcomes.

5. RECOMMENDED LITERATURE

5.1 Core Literature

1. Anikin, B.A. (Ed.), & Rodkina, T.A. (Ed.). Logistics: A Textbook. Moscow: Prospekt, 2020. 408 p.
2. Sergeev, V.I. Logistics: Theory and Practice of Supply Chain Management. Moscow: Yurait Publishing House, 2022.
3. Anikin, B.A. Logistics: Textbook. Moscow: INFRA-M, 2023.
4. Afonichev, R.Yu., Tikhonova, N.A., & Shakhov, V.G. Information Technologies in Logistics: A Study Guide. Moscow: Federal State Budgetary Institution of Continuing Professional Education "Educational and Methodological Center for Railway Transport Education", 2018. 196 p.
5. Syrtanov, S.A. Transport Systems and Processes. Human Resources and Competitiveness of Transport Enterprises: A Study Guide. Almaty, 2016. 94 p.
6. Ivanov, G.G., & Kireeva, N.S. Warehouse Logistics: A University Textbook. Moscow: FORUM; INFRA-M, 2016. 192 p.
7. Gerami, V.D., & Kolik, A.V. Transport Systems Management. Transport Support of Logistics: Textbook and Practical Guide. Moscow: Yurait Publishing House, 2016. 438 p.
8. Balalaev, A.S., & Korol, R.G. Terminal and Logistics Complexes: A Study Guide. Moscow: Federal State Budgetary Institution of Continuing Professional Education "Educational and Methodological Center for Railway Transport Education", 2018. 156 p.
9. Mirotin, L.B., et al. Transport Logistics in Supply Chains: A Study Guide. Moscow: Federal State Budgetary Institution of Continuing Professional Education "Educational and Methodological Center for Railway Transport Education", 2018. 144 p.
10. Balalaev, A.S., & Garlitsky, E.I. Operational Technologies of Carrier and Freight Forwarding Companies: A Study Guide. Moscow: Federal State Budgetary Institution of Continuing Professional Education "Educational and Methodological Center for Railway Transport Education", 2018. 134 p.
11. Suleimenov, T.B. Transport Logistics. Astana, 2012. 211 p. Available at: www.enu.kz

5.2 Additional Literature

1. Nerush, Yu.M., Panov, S.A., & Nerush, A.Yu. Logistics: Theory and Practice of Logistics System Design. Textbook and Practical Guide. Moscow: Yurait Publishing House, 2019. 422 p.
2. Stepanov, V.I. Logistics: Textbook. Moscow: Prospekt, 2016. 488 p.
3. Gadzhinsky, A.M. Logistics. Moscow: Dashkov & Co. Publishing and Trading Corporation, 2016. 308 p.
4. Miloslavskaya, S.V., & Pochaev, Yu.A. Transport Systems and Freight Transportation Technologies: A Study Guide. Moscow: INFRA-M, 2017. 116 p.
5. Troitskaya, N.A., & Shilimov, M.V. Transport and Technological Schemes for the Transportation of Specific Types of Cargo: A Study Guide. Moscow: KNORUS, 2016. 232 p.
6. Stock, J.R., & Lambert, D.M. Strategic Logistics Management (Translated from English). Moscow: INFRA-M.