«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 "30" 05 2025 year (Protocol № 10)

PROGRAM
THE ENTRANCE EXAM TO THE DOCTORAL PROGRAM

Group of educational programs
" D148 Logistics (by industry)"

Almaty, 2025

The program of the entrance exam was discussed and received a positive decision at the meeting of the Department of Transport Services and Business, Protocol No. 9 on April 21, 2025.

Head of the Department of «Department of Transport Services and Business» **R.D. Mussaliyeva**

The program of the entrance exam was reviewed and recommended at the meeting of the Council of the Institute of Logistics and Business, protocol No. No.5 dated April 29, 2025.

Chairman of the SI "Logistics and Business" **G.S.Musaeva**

CONTENT

1. The purpose of the entrance exam for a group of educational programs

The purpose of the entrance examination for the groups of educational programs is to determine the theoretical and practical readiness of the applicant for doctoral studies, as well as the level of knowledge, skills, and competencies in accordance with the requirements of doctoral training in the relevant field of study.
The doctoral entrance examination consists of writing an essay and passing an exam in the profile of the educational program group.

2. Regulations for conducting the entrance exam for doctoral studies in a group of educational programs

The duration of the entrance examination is 3 hours and 30 minutes, during which the applicant writes an essay and answers an electronic exam ticket consisting of 3 questions. The list of questions and the essay topic are generated randomly. The maximum score for the entrance examination is 100 points, distributed as follows: essay writing – 20 points, exam on the educational program profile – 50 points, and 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 argumentation about the motivations for research activities (research statement)	At least 250 words
Scientific and analytical	Substantiation by applicants of the relevance and methodology of the proposed research (research proposal)	
Problem-themed	Presentation of the author's position on relevant aspects of subject knowledge	

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 Changes: Key Challenges, Adaptation Strategies, and Development Prospects
2	Digital transformation in logistics in the field of road transport
3	Research and selection of an effective logistics scheme for cargo delivery
4	Development of digital business based on the introduction of digital twins in the field of logistics and transport
5	Green Logistics as a Strategic Priority for Sustainable Development: Challenges, Innovations, and Long-Term Prospects
6	Application of "Green technologies" in the logistics service of the enterprise
7	The Impact of Implementing Automated Transport and Warehouse Systems on the Efficiency, Sustainability, and Competitiveness of Logistics Amid Technological Progress and Changing Market Demands
8	Transport infrastructure of Kazakhstan: current situation and development prospects
9	Assessment of the current situation of the transport and logistics market of the Republic of Kazakhstan from the point of view of containerization
10	The Role of the Caspian Region in Shaping New Logistics Routes and Global Export Flows: Geo-Economic Significance, Transport Potential, and Challenges of Sustainable Development

4.2 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

4.3 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.

4.4 Interview questions

1. Main directions of the chosen scientific research activity
2. Which research methods should be applied within the framework of the future study
3. For solving which logistics problems would you apply the achievements in digital technology and artificial intelligence
4. Describe the specific features of transport logistics development in Kazakhstan
5. Justify the choice of your research topic and object. How relevant is it to conduct research in this direction
6. Describe the role and importance of a logistician in transport-logistics companies and other production-related organizations
7. Application of artificial intelligence technologies in logistics
8. Artificial intelligence in warehouse logistics: future or present?
9. Insourcing vs. outsourcing in logistics. Choosing between insourcing and outsourcing strategies
10. Transport and warehouse documentation in a company. Workflow scheme of export and import documentation
11. Is it possible to build a process chain like this: Component Supply – Production – Sales – IT Support – Delivery?
12. Business process reengineering: definition, objectives, key aspects
13. Stages of modeling and analyzing business processes in business process reengineering projects
14. Tools and technologies for automation of modeling, analysis, and redesign of business processes (CASE technologies)
15. Cargo insurance specifics: what is insurance, types and principles, information needed for insurance purchase, factors influencing cost, and determining the insured amount

5. Recommended literature

5.1 Basic literature

1. Б.А. Аникин Логистика: учебное пособие / Под ред. Б.А. Аникина, Т.А.Родкиной. - М.: Проспект, 2020. - 408 с.

2. Гайдаенко А.А. Логистика: учебник / А.А. Гайдаенко, О.В. Гайдаенко. - 3-е изд., стереотип. - М.: КНОРУС, 2016. - 268с.

3. Логистика: тренинг и практикум: учебное пособие / Под ред. Б.А. Аникина, Т.А. Родкиной. - М.: Проспект, 2016. – 448 с.

4. Афоничев Р.Ю. Информационные технологии в логистике: учебное пособие / Р.Ю. Афоничев, Н.А. Тихонова, В.Г. Шахов. - М.: ФГБУ ДПО "Учебно-методический центр по образованию на железнодорожном транспорте", 2018. - 196 с.

5. Сыртанов С.А. Транспортные системы и процессы. Человеческие ресурсы и конкурентоспособность предприятия транспорта: учебное пособие / С.А. Сыртанов. - Алматы, 2016. - 94 с.

6. Иванов Г.Г. Складская логистика: учебник для вузов / Г.Г. Иванов, Н.С. Киреева. - М.: ФОРУМ: ИНФРА-М, 2016. - 192с.

7. Герами В.Д. Управление транспортными системами. Транспортное обеспечение логистики: Учебник и практикум / В.Д. Герами, А.В. Колик.- М.: Изд-во Юрайт, 2016. – 438 с.

8. А.С. Балалаев. Терминально - логистические комплексы: учебное пособие / А.С. Балалаев, Р.Г. Король. - М.: ФГБУ ДПО "Учебно методический центр по образованию на железнодорожном транспорте", 2018. - 156 с.

9. Л.Б. Миротин и др. Логистика транспорта в цепи поставок: учебное пособие. - М.: ФГБУ ДПО "Учебно методический центр по образованию на железнодорожном транспорте". - 2018. - 144 с.

10. Балалаев А.С. Технология работы операторских и экспедиторских компаний: учебное пособие / А.С. Балалаев, Е.И. Гарлицкий. - М.: ФГБУ ДПО "Учебно методический центр по образованию на железнодорожном транспорте", 2018. - 134 с.

11. Мусалиева, Р.Д. Взаимодействие видов транспорта: учебное пособие / Р.Д. Мусалиева. - Алматы: КазАТК, 2017. - 204 с.

12. Инновационные процессы логистического менеджмента в интеллектуальных транспортных системах / Под общ. ред. Б.А. Левина, Л.Б. Миротина. - М.: ФГБОУ "Учебно-методический центр по образованию на железнодорожном транспорте", 2015. - 374 с.

5.2 Additional literature

1. Неруш Ю.М. Логистика: теория и практика проектирования: Учебник и практикум. / Ю.М. Неруш, С.А. Панов, А.Ю. Неруш. - М.: Юрайт, 2019. - 422 с.

2. Степанов В.И. Логистика: учебник / В.И. Степанов. - М.: Проспект, 2016. - 488 с.

3. А.М. Гаджинский Логистика. М.: Издательско-торговая корпорация «Дашков и К» - 2016. -308 с.

4. Милославская С.В. Транспортные системы и технологии перевозок: учебное пособие / С.В. Милославская, Ю.А. Почаев. - М.: ИНФРА-М, 2017. - 116 с.

5. Троицкая Н.А. Транспортно-технологические схемы перевозок отдельных видов грузов: учебное пособие / Н.А. Троицкая, М.В. Шилимов. - М.: КНОРУС, 2016. - 232 с.