**School of Transport Engineering and Logistics named after M.Tynyshpayev**
**«Logistics» direction**

# EDUCATIONAL PROGRAM

## 8D11304 Logistics and supply chain management

Code and classification of the field of education: **8D11 Services**
Code and classification of training directions: **8D11 Transport services**
Group of educational programs: **D148 Logistics (by industry)**
Level based on NQF: **8**
Level based on IQF: **8**
Study period: **3**
Amount of credits: **180**

**Almaty 2025**

Educational program 8D11304 «Logistics and supply chain management» approved at the meeting of the Academic Council of Satbayev University.

Protocol No. 10 dated March 6, 2025.

Reviewed and recommended for approval at the meeting of the Educational and Methodological Council of Satbayev University.

Protocol No. 3 dated December 20, 2024.

The Educational Program 8D11304 «Logistics and supply chain management» was developed by the Academic Committee in the field of study 8D113 Transport services.

| Full name | Academic degree / title | Position | Workplace | Signature |
|---|---|---|---|---|
| **Chair of the Academic Committee:** | | | | |
| Bektilyovov Aldabergen Yusupovich | PhD | Acting Head | Satbayev University | |
| **Faculty members:** | | | | |
| Bekzhanova Saule Ertaevna | Doctor of Technical Sciences, Professor | Professor | Satbayev University | |
| Mukhanova Gulmira Samudinovna | Candidate of Technical Sciences, Associate Professor | Professor | Satbayev University | |
| Tymbaeva Zhazira Muratbekovna | Candidate of Economic Sciences | Associate Professor | Satbayev University | |
| Izbairova Aliya Serikovna | Candidate of Technical Sciences, Associate Professor | Associate Professor | Satbayev University | |
| Kiseleva Olga Gennadievna | Candidate of Technical Sciences | Associate Professor | Satbayev University | |
| **Employers:** | | | | |
| Tansykkozshin Aidos Dauletovich | - | General Director | LLP "ZhebeLogistics" | |
| Sharubekov Murat Nesipbekovich | Candidate of Technical Sciences | Advisor to the General Director | LLP "Azurit Railway Solutions" | |
| **Students:** | | | | |
| Seidilda Shugyla | - | 2nd-year student | Satbayev University | |

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## List of abbreviations and designations

EP - educational program
NRK - National Qualification Framework
IRK - Industry Qualification Framework

## 1. Description of educational program

8D11304 Logistics and supply chain management EP is developed in accordance with the requirements to the level of doctoral student training, which are determined on the basis of the Dublin descriptors of the third level of higher education (doctoral studies) and reflect the mastered competences expressed in the achieved learning outcomes.

## 2. Purpose and objectives of educational program

**Purpose of EP:** Training of highly professional and scientific-pedagogical staff capable of conducting research in the field of logistics and supply chain management based on scientific methods, principles of strategic and corporate management of logistics business processes and systems.

**Tasks of EP:**

- formation of a specialist with skills in coordinating logistics processes, implementing efficient and sustainable methods;
- improving analytical and forecasting models to improve planning, inventory management and risk assessment processes in the supply chain;
- development of human resources potential in the field of supply chain management to ensure the development of the logistics industry; formation and development of an advanced scientific school that promotes continuous growth of new knowledge in the field of supply chain management;
- development of cooperation in the sphere of science, education and business environment within the framework of a common information space for effective management of the transport and logistics complex.

## 3. Requirements for evaluating the educational program learning outcomes

As a result of mastering the OP modules, doctoral students develop theoretical knowledge, skills and abilities necessary to carry out professional activities in the field of logistics on the basis of modern methods of decision-making, project management tools and principles of effective management of business processes. As a result of training the graduate of the OP develops skills of scientific research.

The graduate is awarded the qualification of Doctor of Science in the profile of OP 8D11304 Logistics and supply chain management.

# 4. Passport of educational program

## **4.1.** General information

| № | Field name | Comments |
|---|---|---|
| 1 | Code and classification of the field of education | 8D11 Services |
| 2 | Code and classification of training directions | 8D113 Transport services |
| 3 | Educational program group | D148 Logistics (by industry) |
| 4 | Educational program name | 8D11304 Logistics and supply chain management |
| 5 | Short description of educational program | As a result of mastering the OP modules, doctoral students develop theoretical knowledge, skills and abilities necessary to carry out professional activities in the field of logistics on the basis of modern methods of decision-making, project management tools and principles of effective management of business processes. As a result of training the graduate of the OP develops skills of scientific research.<br>The graduate is awarded the qualification of Doctor of Science in the profile of OP 8D11304 Logistics and supply chain management. |
| 6 | Purpose of EP | Training of highly professional and scientific-pedagogical staff capable of conducting research in the field of logistics and supply chain management based on scientific methods, principles of strategic and corporate management of logistics business processes and systems. |
| 7 | Type of EP | New EP |
| 8 | The level based on NQF | 8 |
| 9 | The level based on IQF | 8 |
| 10 | Distinctive features of EP | no |
| 11 | List of competencies of educational program | **Analytical and cognitive:** Ability to work with large amounts of data, identify patterns and make decisions based on analytics and application of scientific methods.<br>**Digital skills:** Ability to work with modern supply chain management and process monitoring information systems and software products (e.g. SAP, Oracle, WMS).<br>**Managerial and communication:** Skills in supply chain design and management, forming long- and short-term strategies to improve all supply chain processes, including sourcing, production planning and logistics through effective collaboration of all supply chain participants.<br>**Professional:** ability to analyse and identify risks that may affect supply chain performance, including supply problems, market changes, political risks, economic crises, ensuring flexibility and the ability to adapt quickly to changes in demand or external situations.<br>**Integrative and interpersonal:** ability to respond quickly to problems in the supply chain, resolving emerging conflicts with suppliers and transport companies. |

| | | |
|---|---|---|
| 12 | Learning outcomes of educational program | 1. Possesses knowledge of scientific research methods and tools, as well as skills in writing academic and scientific texts of various levels, including in a foreign language, when conducting research work.<br>2. Uses principles and concepts of corporate management, strategic solutions to improve the efficiency and competitiveness of transport and logistics companies.<br>3.Is able to effectively plan, organise and manage logistics processes based on the principles of sustainable development.<br>4.Applies analytical methods and tools, advanced innovative technologies and approaches in data analysis, as well as develops corporate management strategies to improve the efficiency of logistics companies, business processes and supply chain management.<br>5.Designs end-to-end logistics business processes within an integrated supply chain management system based on a systematic approach.<br>6.Develops and designs logistics networks and supply chain based on project management methods and tools<br>7.Develops an effective supply chain management system taking into account current and future trends in logistics using modern management decision-making methods |
| 13 | Education form | Full-time |
| 14 | Period of training | 3 |
| 15 | Amount of credits | 180 |
| 16 | Languages of instruction | Russian, kazakh, english |
| 17 | Academic degree awarded | Doctorate |
| 18 | Developer(s) and authors | Mukhanova Gulmira Samudinovna<br>Imasheva Gulnar Mahmutovna<br>Tymbayeva Zhazira Muratbekovna<br>Chakeyeva Karylgash Caulaubayevna |

## 4.2. Relationship between the achievability of the formed learning outcomes based on educational program and academic disciplines

| № | Discipline name | Short description of discipline | Amount of credits | Generated learning outcomes (codes) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | LO 1 | LO 2 | LO 3 | LO 4 | LO 5 | LO 6 | LO 7 |
| **Cycle of basic disciplines University component** | | | | | | | | | | |
| 1 | Academic writing | Purpose: To form the system competencies of doctoral students and young researchers in the field of academic writing as a key tool for scientific communication and publication activities. Content: Scientific discourse and academic communication; Typology of scientific texts: from dissertation to publication; Creation of original scientific content; Scientific text: structure and logic of construction; Comparative analysis of sources and preparation of a literary review; Work with metadata and scientometric tools; Preparation of articles for international peer-reviewed journals; Work with reviews and the scientific community; Academic mobility and grant support for research; Annotations, patents, reports: science beyond the article; Planning of publication strategy and research career; English language of scientific communication. | 5 | **v** | | | | | | **v** |
| 2 | Methods of scientific research | Purpose: It consists in mastering knowledge about the laws, principles, | 5 | **v** | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | concepts, terminology, content, specific features of the organization and management of scientific research using modern methods of scientometry. Contents: structure of technical sciences, application of general scientific, philosophical and special methods of scientific research, principles of organization of scientific research, methodological features of modern science, ways of development of science and scientific research, the role of technical sciences, computer science and engineering research in theory and practice. | | | | | | | | |
| **Cycle of basic disciplines Component of choice** | | | | | | | | | | |
| 3 | Sustainability of logistics processes | The purpose of the discipline – to develop students' skills and knowledge required to design, implement and manage logistics systems that can function effectively under conditions of uncertainty and external factors affecting supply chain stability. Content: The development of sustainable supply chains. Risk assessment and management. Analysing external factors affecting the sustainability of logistics processes. Innovative technologies and sustainability. Crisis management in logistics. | 5 | | | **v** | | **v** | | |
| 4 | Sustainability Science | Objective: to develop a deep understanding among doctoral students of the interactions between natural and | 5 | | | **v** | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | social systems, as well as to develop skills for identifying and developing strategies for sustainable development that promote long-term human well-being and environmental preservation. Content: complex interconnections between ecosystems and societies. An analysis of sustainability issues at local, national, and international levels. | | | | | | | | |
| **Cycle of profile disciplines Component of choice** | | | | | | | | | | |
| 5 | Business analytics in supply chain management | The purpose of the discipline - to acquire knowledge and skills in applying analytical tools to improve the efficiency of logistics processes and supply chain management based on modern technology and information systems. Content: Methods and tools of data analysis in logistics business processes. Models for analysing supply chain processes and forecasting their efficiency. Statistical methods and machine learning for analysing trends in customer demand. Advanced technologies and innovative approaches in data analytics. | 5 | | | | **v** | | | |
| 6 | Corporate governance of transportation and logistics companies | Purpose: To explore the key principles, concepts and practices necessary for effective management of transportation and logistics companies. Content: Understanding the structure and functions of corporate organizations in the field of transport services. Analysis of strategic management of | 5 | | **v** | | **v** | | | **v** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | transportation and logistics companies: strategy formulation, strategic decision making and evaluation of strategic success. Financial and resource management in transportation. Ethical and social aspects of management. Human capital in transportation and logistics companies. Corporate strategy and competitiveness of transportation and logistics companies. | | | | | | | | |
| 7 | Management of business processes in the supply chain | The purpose of the discipline – to build skills for effective supply chain management, optimising business processes, making them more flexible, transparent and sustainable. Content: Principles and approaches to the organization and management of supply chains. Analysis and modeling of business processes. Logistics and transportation in the supply chain. Use of information technologies and systems. Risk and uncertainty management. Cooperation and partnership in supply chains. | 5 | | | | **v** | **v** | **v** | |
| 8 | Project management in logistics and supply chain | The purpose of the discipline - to develop skills in applying modern project management tools and methods to develop efficient logistics systems and supply chain. Content: Project management methods: Waterfall and Agile. Methods and tools of project planning. Social significance and commercial attractiveness of logistics projects. Key factors of effective and | 5 | | | | **v** | **v** | **v** | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | stable project model in logistics. Modern technologies in logistics project management. | | | | | | | | |

# 5. Curriculum of educational program

NON-PROFIT JOINT STOCK COMPANY
"KAZAKH NATIONAL RESEARCH TECHNICAL UNIVERSITY NAMED AFTER K.I. SATBAYEV"

SATBAYEV UNIVERSITY

«APPROVED»
Decision of the Academic Council
NPJSC«KazNRTU
named after K.Satbayev»
dated 20.02.2025 Minutes № 9

## WORKING CURRICULUM

Academic year: 2025-2026 (Autumn, Spring)
Group of educational programs: D148 - "D148 Logistics (by industry)"
Educational program: 8D11304 - "Logistics and supply chain management"
The awarded academic degree: Doctor by profile
Form and duration of study: full time (professional track) - 3 years

| Discipline code | Name of disciplines | Block | Cycle | Total ECTS credits | Total hours | lek/lab/pr Contact hours | In hours SIS (including TSIS) | Form of control | Allocation of face-to-face training based on courses and semesters | | | | | | Prerequisites |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 1 course | | 2 course | | 3 course | | |
| | | | | | | | | | 1 sem | 2 sem | 3 sem | 4 sem | 5 sem | 6 sem | |
| **CYCLE OF GENERAL EDUCATION DISCIPLINES (GED)** | | | | | | | | | | | | | | | |
| **CYCLE OF BASIC DISCIPLINES (BD)** | | | | | | | | | | | | | | | |
| **M-1. Module of basic training (university component)** | | | | | | | | | | | | | | | |
| MET322 | Methods of scientific research | | BD, UC | 5 | 150 | 30/0/15 | 105 | E | 5 | | | | | | |
| LNG305 | Academic writing | | BD, UC | 5 | 150 | 0/0/45 | 105 | E | 5 | | | | | | |
| LOG335 | Sustainability of logistics processes | 1 | BD, CCH | 5 | 150 | 30/0/15 | 105 | E | 5 | | | | | | |
| MNG350 | Sustainability Science | 1 | BD, CCH | 5 | 150 | 30/0/15 | 105 | E | 5 | | | | | | |
| **M-3. Practice-oriented module** | | | | | | | | | | | | | | | |
| AAP350 | Pedagogical practice | | BD, UC | 10 | | | | R | | 10 | | | | | |
| **CYCLE OF PROFILE DISCIPLINES (PD)** | | | | | | | | | | | | | | | |
| **M-2. Module of professional activity (component of choice)** | | | | | | | | | | | | | | | |
| LOG334 | Business analytics in supply chain management | 1 | PD, CCH | 5 | 150 | 30/0/15 | 105 | E | 5 | | | | | | |
| LOG326 | Corporate governance of transportation and logistics companies | 1 | PD, CCH | 5 | 150 | 30/0/15 | 105 | E | 5 | | | | | | |
| LOG333 | Management of business processes in the supply chain | 2 | PD, CCH | 5 | 150 | 30/0/15 | 105 | E | 5 | | | | | | |
| LOG336 | Project management in logistics and supply chain | 2 | PD, CCH | 5 | 150 | 30/0/15 | 105 | E | 5 | | | | | | |
| **M-3. Practice-oriented module** | | | | | | | | | | | | | | | |
| AAP355 | Research practice | | PD, UC | 10 | | | | R | | | 10 | | | | |
| **M-4. Experimental research module** | | | | | | | | | | | | | | | |
| AAP372 | Experimental research work of doctoral student, including internships and doctoral dissertations | | ERWDS | 5 | | | | R | 5 | | | | | | |
| AAP376 | Experimental research work of doctoral student, including internships and doctoral dissertations | | ERWDS | 10 | | | | R | 10 | | | | | | |
| AAP376 | Experimental research work of doctoral student, including internships and doctoral dissertations | | ERWDS | 10 | | | | R | | 10 | | | | | |
| AAP374 | Experimental research work of doctoral student, including internships and doctoral dissertations | | ERWDS | 30 | | | | R | | | 30 | | | | |
| AAP372 | Experimental research work of doctoral student, including internships and doctoral dissertations | | ERWDS | 5 | | | | R | | | 5 | | | | |
| AAP376 | Experimental research work of doctoral student, including internships and doctoral dissertations | | ERWDS | 10 | | | | R | | | | 10 | | | |
| AAP372 | Experimental research work of doctoral student, including internships and doctoral dissertations | | ERWDS | 5 | | | | R | | | | 5 | | | |
| AAP374 | Experimental research work of doctoral student, including internships and doctoral dissertations | | ERWDS | 30 | | | | R | | | | | 30 | | |
| AAP375 | Experimental research work of doctoral student, including internships and doctoral dissertations | | ERWDS | 18 | | | | R | | | | | | 18 | |
| **M-5. Module of final attestation** | | | | | | | | | | | | | | | |
| ECA325 | Final examination (writing and defending a doctoral dissertation) | | FA | 12 | | | | | | | | | | 12 | |
| **Total based on UNIVERSITY:** | | | | | | | | | 40 | 20 | 45 | 15 | 30 | 30 | |
| | | | | | | | | | 60 | | 60 | | 60 | | |

**Number of credits for the entire period of study**

| Cycle code | Cycles of disciplines | Credits | | | |
|---|---|---|---|---|---|
| | | Required component (RC) | University component (UC) | Component of choice (CCH) | Total |
| GED | Cycle of general education disciplines | 0 | 0 | 0 | 0 |
| BD | Cycle of basic disciplines | 0 | 20 | 5 | 25 |
| PD | Cycle of profile disciplines | 0 | 10 | 10 | 20 |
| **Total for theoretical training:** | | **0** | **30** | **15** | **45** |
| RWDS | Research Work of Doctoral Student | | | | 0 |
| ERWDS | Experimental Research Work of Doctoral Student | | | | 123 |
| FA | Final attestation | | | | 12 |
| **TOTAL:** | | | | | **180** |

**Decision of the Educational and Methodological Council of KazNRTU named after K.Satpayev. Minutes № 4 dated 03.02.2025**

**Decision of the Academic Council of the Institute. Minutes №3a dated 20.12.2024**

**Signed:**

Governing Board member - Vice-Rector for Academic Affairs — Uskenbayeva R. K.

**Approved:**

Vice Provost on academic development — Kalpeyeva Z. S.

Head of Department - Department of Educational Program Management and Academic-Methodological Work — Zhumagaliyeva A. S.

Supervisor - School of Transport Engineering and Logistics — Abdullayev S. C.

Department Chair - Logistics — Bektilevov A. Ю.

Representative of the Academic Committee from Employers ___Acknowledged___ — Sharubekov M.