Ministry of Science and Higher Education of the Republic of Kazakhstan
Karaganda University of the name of academician E.A. Buketov

«APPROVED BY»
The decision of the Administration of
NLC «Karaganda University of the name
of academician E.A. Buketov»

Protocol № 8   04.05.2024

_____ prof. N.O. Dulatbekov

«APPROVED BY»
The decision of the Directory Board of
NLC «Karaganda University of the name
of academician E.A. Buketov»

Protocol № 5   21.06.2024

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EDUCATIONAL PROGRAM

8D04103 – Sustainable finance

Level: Doctoral studies (PhD)

Karaganda,
2024

APPROVAL SHEET

EDUCATIONAL PROGRAM "8D04103- Sustainable Finance"

«AGREED»

Deputy Director for Small and Medium Business
Branch of Bank CenterCredit JSC, Karaganda

_____ R.K. Dyusenov
« 08 04 » _____ 20__

«AGREED»

Deputy Chairman of the Board
L.P.CO "EximArtis"

_____ Zh.N. Kenzhebaev
« 08 04 » _____ 20__

The educational program in the specialty «8D04103 – Sustainable Finance» is developed on the basis of:

– The Law of the Republic of Kazakhstan dated July 27, 2007 No. 319-III «About Education»,

- Order of the Minister of Science and Higher Education of the Republic of Kazakhstan "On approval of state compulsory standards of higher and postgraduate education" dated July 20, 2022

- Concept for the development of higher education and science in the Republic of Kazakhstan for 2023-2029, approved by Decree of the Government of the Republic of Kazakhstan dated March 28, 2023 No. 248.

– The National Qualifications Framework of March 16, 2016 by the Republican Tripartite Commission on Social Partnership and Regulation of Social and Labor Relations.

– Order of the Ministry of Education and Science of the Republic of Kazakhstan «About approval of the Rules for the organization of the educational process on credit technology» (with changes and additions).

– Classifier of training areas with higher and postgraduate education dated October 13, 2018 No. 569.

Contents

Passport of the educational program

1. Code and name of the educational program: «8D04103 – Sustainable Finance»

2.Code and classification of the field of education, areas of training: 04.Business management and law, 8D041 - Business and Management

3.Group of educational programs: D074 "Finance, banking and insurance"

4.Amount of credits: 180 ECTS

5.Form of study: full-time

6.Language of instruction: Kazakh, Russian

7.Degree awarded: Doctor of Philosophy PhD/Doctor in the profile of the educational program «8D04103 – Sustainable Finance»

8. Type of educational program: current.

9. The level of the ISCE(International Standard Classification of Education) – Level 8;

10. The level of the (National Qualifications Framework) – Level 8;

11. The level of the (Industry Qualifications Framework) – Level 8.

12.Distinctive features of EP: no

13.Number of the appendix to the license for the direction of personnel training: No. 036 dated 02.04.2019.

14.The name of the accreditation body and the validity period of the EP accreditation: no

15. The purpose of the EP The purpose of the educational program - fundamental training of scientific and pedagogical specialists in the field of finance towards sustainable development priorities.

16. Qualification characteristics of the graduate:

a) Graduates of this educational program in the specialty «8D04103 – Sustainable Finance » can work in the following positions:

- positions of teaching staff;
- scientific staff;
- managers in the financial sector and business structures;
- managers in the public finance sector.

b) The scope and objects of professional activity of the graduate:

- higher educational institutions;
- research institutes, scientific centers;
- enterprises and sectors of the national economy;
- financial and credit system, securities market, insurance sector;
- public administration and financial control bodies;
- national companies and holdings;
- international financial organizations and development institutions.

Graduates can carry out professional activities in other areas and (or) areas of professional activity, provided that their level of education and acquired competencies meet the requirements for employee qualifications.

The objects of professional activity of PhD doctors are: higher educational institutions, research institutes, financial and credit organizations, production and economic, financial services of enterprises, business structures, organizations and departments, the Ministry of Finance of the Republic of Kazakhstan and its divisions, the National Bank of the Republic of Kazakhstan and its divisions .

The subject of professional activity of graduates in the educational program is: the study of actions and forms of manifestation of general, particular and specific economic laws of development of the financial system in accordance with the principles of the SDGs.

c) Types of professional activity of the graduate:

- educational activities;
- research activities;
- design and analytical activities;
- organizational and managerial activities.

d) Functions of the graduate's professional activity:

- teaching financial and economic disciplines in higher educational institutions, conducting scientific research in research institutes in the field of sustainable finance, ESG investing, modern financial technologies and improving the financial system in accordance with the criteria of sustainable development;

- carrying out a comprehensive analysis and forecasting of financial and economic indicators of the development of the national economy using economic and mathematical modeling, software services and artificial intelligence technologies;

- making science-based decisions in the field of finance, taking into account the influence of endogenous and exogenous factors, the need to achieve national priorities and SDGs;

- development and implementation of innovative technologies and projects in the financial sector, a set of organizational and managerial measures to improve the financial sector and public finances.

17. Formulation of learning outcomes based on competencies

Type of competencies	Learning result code	Learning result (according to Bloom's taxonomy)
1. Softskills	LO 1	Able to write scientific texts in a foreign language, forms the structural parts of scientific works
	LO 2	Uses research methods, analyzes the results of scientific research in the field of finance, and applies them to solve research problems. Demonstrates the skills of independent scientific research using modern information technologies, presents the main provisions and conclusions of scientific research; demonstrates a breadth of outlook in the professional field
	LO 3	Organizes research, experimental and project activities of students
2. Digital skills	LO 4	Solves a set of problems related to the identification and implementation of ESG risks in the traditional risk management system of the financial sector
	LO 5	Based on the use of artificial intelligence technology, analyzes data on the financial condition of companies, stock market development trends, forms an investment portfolio, predicts changes in financial and economic indicators. Forms conclusions and recommendations based on big data analysis, identifies factors influencing financial processes
3. Hardskills	LO 6	Formulates the priorities of the state's modern financial policy taking into account sustainable development goals. Evaluates approaches to the formation and use of public finance and ensuring financial stability. Justifies decisions to improve the effectiveness of fiscal and monetary policies in the context of sustainable growth standards
	LO 7	Knows how to apply sustainable financing strategies and tools, identify their liquidity and profitability. Applies practical skills in collecting and processing information to issue and verify green financial instruments. Adapts positive foreign experience in regulating sustainable finance and expanding ESG investing
	LO 8	Uses financial engineering technologies to formulate optimal investment strategies and business financing schemes, increasing the competitiveness of financial organizations

18. Determination of modules of disciplines in accordance with the results of training

Learning result code	Name of the module	Name of disciplines	Volume (ECTS)
LO 1	Methodological basics of research	Academic writing (in English)	5
LO 2		Methods of scientific research	5
LO 3		Teaching practice	10
LO 6	Conceptual Framework for Sustainable Finance	State financial policy and sustainable development strategies	5
LO 2, LO 6		Research practice	10
LO 7	Megatrends in the development of the financial sector in the context of ESG transformation	Sustainable Finance Instruments	5
LO 4		ESG risks in the financial sector	
LO 8		Financial engineering	5
LO 5		AI technologies in finance	
LO 2, LO 5, LO 6, LO 7	Research work of a doctoral candidate	Research work of a doctoral student, including internship and doctoral thesis	123
	Final assessment	Writing and defending a doctoral thesis	12

19. Matrix of achievability of learning outcomes

NN	Name of disciplines	Brief description of the discipline	Number of credits	Generated learning outcomes (codes)							
				LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8
Cycle of basic disciplines University component											
D1	Academic writing (in English)	The discipline is studied in order to form competencies related to analytical research and textual activities; skills of analytical-synthetic, critical and pragmatic thinking. In the process of studying the discipline, the types, methods and ethical principles of writing scientific texts, the principles of constructing a scientific text and preparing it for publication, the design of a bibliographic list, the basic rules for quoting scientific literature, the types of annotations and the features of their compilation, reviewing a scientific text are considered.	5	+							
D2	Methods of scientific research	The discipline is studied in order to form the skills of doctoral students to carry out independent research activities; the use of scientific research methods to achieve the objectives set in the dissertation research; the use of methods of processing empirical data on the topic of their dissertation research.	5		+						
D3	Teaching practice	The goal of teaching practice is the development of professional pedagogical competencies of a doctoral student, familiarization with the specific conditions of teaching activity at a university and consolidation of theoretical knowledge in practice, mastery of the basics of pedagogical skills, skills in designing the educational process using educational innovations.	10			+					
Cycle of basic disciplines Component of choice											
D4	Sustainable Finance Instruments	This course is studied with the aim of developing in-depth knowledge of sustainable finance instruments and methods of managing them. The discipline covers a wide range of issues in the field of responsible investment, issuance and verification of "green" bonds, "green" lending and standardization of sustainable finance	5							+	
	ESG risks in the financial sector	The course is studied with the aim of developing knowledge and practical skills in assessing, forecasting and reducing ESG risks in the activities of financial organizations. The course is designed to study quantitative and qualitative risk criteria, experience in integrating ESG risks into traditional risk management systems of the financial sector	5				+				
Cycle of specialized disciplines University component											
D5	State financial policy and sustainable development strategies	The discipline forms a systematic understanding of the state's financial policy in conjunction with the concept of sustainable development. The purpose of studying the discipline is to gain knowledge on transforming the financial system towards ESG standards, skills in using regulatory methods and promoting sustainable finance.	5						+		

D6	Research practice	The purpose of the research practice is for doctoral students to study the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as to consolidate practical skills in applying modern methods of scientific research, processing and interpretation of experimental data in dissertation research.	10		+					+	
Cycle of specialized disciplines / Component of choice											
D7	Financial engineering	The purpose of the discipline is to develop knowledge and skills in designing complex financial instruments and structured products with predetermined parameters. The discipline also involves studying methods for analyzing financial assets, finding optimal sources of financing for corporations, securitization and hedging strategies.	5								+
	AI technologies in finance	The course is aimed at developing knowledge in the field of using intelligent information systems in the processing and analysis of financial information, modeling financial processes and systems. The course provides a conceptual understanding of the capabilities of financial intelligent technologies based on data processing and machine learning (intelligent credit services, intelligent insurance services, etc).	5					+			
Research work of a doctoral candidate											
D8	Research work of a doctoral student, including internship and doctoral thesis	The purpose of the doctoral student's research work is to form the level of knowledge, skills and abilities necessary for the implementation of professional activity and to prepare for the defense of a doctoral dissertation. It includes conducting independent scientific research, foreign scientific internship, preparation of scientific publications, execution of a doctoral dissertation.	123		+			+	+	+	

20. Coordination of the planned learning outcomes with the methods of teaching and evaluation within the module

Learning outcomes	Planned learning outcomes for the module	Teaching methods	Assessment methods
LO 1	Able to write scientific texts in a foreign language, forms the structural parts of scientific works	Interactive lecture, discussion, round table, presentation, brainstorming	oral questioning, colloquium, essay
LO 2	Uses research methods, analyzes the results of scientific research in the field of finance, and applies them to solve research problems. Demonstrates the skills of independent scientific research using modern information technologies, presents the main provisions and conclusions of scientific research; demonstrates a breadth of outlook in the professional field	Case methods, discussion, presentation, problem-based lecture, project-based learning, research assignments	Testing, colloquium, project work, scientific research
LO 3	Organizes research, experimental and project activities of students	Practical tasks	Report
LO 4	Solves a set of problems related to the identification and implementation of ESG risks in the traditional risk management system of the financial sector	Case methods, presentation, discussion, practical tasks using IT	Testing, oral examination, portfolio
LO 5	Based on the use of artificial intelligence technology, analyzes data on the financial condition of companies, stock market development trends, forms an investment portfolio, predicts changes in financial and economic indicators. Forms conclusions and recommendations based on big data analysis, identifies factors influencing financial processes	Interactive lecture, discussion, round table, practical tasks using AI	Testing, oral questioning, analytical review
LO 6	Formulates the priorities of the state's modern financial policy taking into account sustainable development goals. Evaluates approaches to the formation and use of public finance and ensuring financial stability. Justifies decisions to improve the effectiveness of fiscal and monetary policies in the context of sustainable growth standards	Interactive lecture, problem lecture	Testing, oral survey, essay
LO 7	Knows how to apply sustainable financing strategies and tools, identify their liquidity and profitability. Applies practical skills in collecting and processing information to issue and verify green financial instruments. Adapts positive foreign experience in regulating sustainable finance and expanding ESG investing	Interactive lecture, solving case situations, project-based learning, flipped class	Colloquium, project preparation, testing
LO 8	Uses financial engineering technologies to formulate optimal investment strategies and business financing schemes, increasing the competitiveness of financial organizations	Interactive lecture, problem lecture	Testing, oral examination, colloquium, essay

21. Criteria for assessing the achievability of learning outcomes

Codes of LO	Criteria
LO 1	**Knows:** methods of writing scientific texts, ethical issues of conducting scientific research.
	Can: process and interpret scientific points of view, discuss scientific problems in the field of finance; describe events, state facts; write scientific texts, including in a foreign language, build scientific communications.
	Owns: skills in preparing scientific articles for publication, generating new ideas in the field of sustainable finance, communication skills.
LO 2	**Knows:** methods, structure and main stages of research work, the basics of organizing and conducting research in the financial sector, scientific approaches when writing a scientific work.
	Can: argue the conclusions of scientific and applied research, analyze and forecast macroeconomic and financial indicators, criteria for sustainable development, formulate recommendations and proposals for solving problems identified during scientific research.
	Owns: the skills to independently carry out scientific research, search, process and use the necessary results of research and analytics, use modern analytical tools and software.
LO 3	**Knows:** the content of the educational process, teaching methods at the university, normative documents regulating scientific and pedagogical activities.
	Can: organize research, design and educational and professional activities, determine and formulate the results of the educational process, develop educational and methodological documentation.
	Owns: pedagogical techniques, skills in designing the educational process, using innovative educational technologies.
LO 4	**Knows:** classification and methods of risk management, their impact on socio-economic processes and the financial system; features of ESG risks.
	Can: assess market and specific risks, including using special software systems and cloud services, to make investment and financial decisions.
	Owns: skills in identifying and managing financial risks; development of risk reduction measures.
LO 5	**Knows:** the basics of digital technologies and AI, the advantages of using AI in the financial sector, the functionality of AI modules and the possibility of integration with software services, the principles of AI ethics.
	Can:

	apply AI in analyzing financial data, identifying risks and forecasting changes in the financial market, the credit process, optimizing the structure of corporate finance.
	Owns: skills in choosing the appropriate AI technology for decision-making in the financial sector, a critical approach to assessing risks and AI threats, analyzing financial products based on the use of AI.
LO 6	**Knows:** the conceptual apparatus of financial policy, goals and principles of sustainable development, strategic government documents and regulatory standards in the field of sustainable finance.
	Can: apply knowledge of the principles and priorities of sustainable and socially responsible financing in the process of developing measures to improve the state's financial policy and financial mechanism.
	Owns: skills in assessing the effectiveness of monetary and fiscal policies, the formation and use of financial resources, taking into account the standards of sustainable growth and financial stability.
LO 7	**Knows:** the essence, classification and specifics of sustainable finance instruments, standards and principles of sustainable bonds and loans, ICMA bond issue models, regulations and taxonomy of "green" finance.
	Can: apply methods for assessing sustainable financial instruments, analyzing financial and non-financial statements for compliance with qualification requirements and GBP, methodology for verification and certification of "green" bonds.
	Owns: the skills to interpret the results of analysis and develop decisions on the issue, circulation and investment in sustainable financial instruments.
LO 8	**Knows:** the purpose and objectives of financial engineering, current trends in the implementation of innovative financial technologies, problems of formation and use of financial assets in conditions of uncertainty.
	Can: design complex financial instruments and structured products in order to protect against risks and increase the profitability of investment portfolios; evaluate the advantages and disadvantages of investment strategies, conduct a comprehensive analysis of innovative financial products.
	Owns: modern financial engineering technologies, skills in analyzing financial assets and investment projects, securitization and hedging techniques.

22. Graduate Attributes

- deep professional knowledge in your field of study;
- interest in mastering modern trends in the field of education and science;
- ability to collaborate in the professional, pedagogical and scientific community;
- independence in searching for opportunities for professional and personal development;
- communication skills;
- tolerance and good manners;
- academic integrity;
- willingness to participate in the process of improving financial policy taking into account the goals of sustainable development of Kazakhstan.

23. The graduate model of the educational program

Types of competencies	Description of competencies
1. Softskills	Applies methods of working with scientific tests, writes scientific articles, reports, interprets scientific research, including in a foreign language. Applies research methods, analyzes the results of scientific research and applies them to solve specific research problems. Capable of carrying out scientific and pedagogical activities at a university. Uses optimal pedagogical techniques and innovative educational technologies. Organizes research, project and educational and professional activities of students.
2. Digital skills	Able to solve problems associated with the implementation of risks, applies risk identification criteria, assesses the level of risks, and the effectiveness of various methods of financial risk management based on information technology. Applies artificial intelligence technologies in the financial sector. Knows how to use cloud and intelligent services in financial processes and project activities. Uses IT in analyzing financial data, predicts changes and relationships between financial and economic indicators.
3. Hardskills	Able to manage the activities of financial organizations and financial departments of companies and government agencies. Knows current trends and problems in the financial policy of the state, priorities of sustainable development, processes of formation and use of centralized and decentralized finance. Applies optimal financial technologies and sustainable financing tools. Able to adapt positive

	foreign experience in the field of sustainable finance and ESG investing. Possesses skills in protecting assets from risks using financial engineering, securitization and hedging technologies Able to formulate goals, objectives, problems and research hypothesis, and carry out research planning. Substantiates the results of experimental work, forms recommendations and proposals on the topic of scientific research.

Compilers:

Working group members:

Head of the Department, Candidate of economic sciences, Professor   E.T. Akbaev

Candidate of economic sciences, Professor   G.M. Kalkabaeva

Candidate of Economic Sciences, Associate Professor   O.A. Tyan

Candidate of economic sciences, Professor   A.K. Kurmanalina

Employer:

Deputy Director for Small and Medium Business
Branch of Bank CenterCredit JSC, Karaganda   R.K. Dyusenov

The educational program was reviewed and recommended by the Faculty Council from _10. 04. 2024_ Protocol No. _9_
The educational program was reviewed at the meeting of the Academic Council of the University and recommended for approval from _29.04.2024_ Protocol No. _5_
The educational program was reviewed and approved at a meeting of the University Board from _24.05.2024_ Protocol No. _8_

Board Member, Vice-Rector for Academic Affairs   **M.M.Umurkulova**

Director of the Department for Academic Work   **T.M. Khasenova**

Dean of the Economic Faculty   **A.N. Lambekova**