APPROVED
Director of Project Management Institute
Amralinova B.B.

Development plan
EP 6B04102 "Mathematical Economics and Data Analysis"
for 2024-2028

Introduction

The educational program 6B04102 "Mathematical Economics and Data Analysis" is aimed at training highly qualified specialists proficient in modern methods of mathematical analysis, econometrics, data analysis, and digital technologies to address current issues in economics, management, and financial analysis.

The program is aligned with national and international qualification standards and labor market requirements, ensuring the competitiveness and relevance of its graduates. The 2024–2028 development plan focuses on enhancing the educational process, expanding practice-oriented methods, and strengthening collaboration with employers and the academic community.

Goals and objectives of the development of the EP

The goal of the educational program is to train professionals who combine strong economic knowledge with the ability to apply mathematical methods, econometrics, economic modeling, and digital tools in practical settings.

Objectives:

- Provide students with fundamental knowledge in economics, mathematics, and statistics.
- Develop mathematical skills, logical thinking, and analytical problem-solving abilities.
- Teach methods of data collection, processing, analysis, and visualization.
- Familiarize students with statistical tools for identifying data patterns and relationships.
- Develop programming skills (Python, R) and use of analytical libraries and platforms.
- Train students in economic modeling and simulation of real-world economic processes.
- Foster critical thinking and informed decision-making based on data.
- Build communication and teamwork skills for presenting findings and collaboration.
- Incorporate practical cases and project-based learning.
- Prepare students for advanced study or careers in economics, finance, consulting, or analytics.

SWOT analysis

Strengths:

- Experienced teaching staff with academic and industry backgrounds.
- Relevant curriculum combining economics and mathematics.
- University support and partnerships with employers.
- Flexible program structure aligned with international standards.

Weaknesses:

- Limited practice-oriented courses.
- Low student involvement in research.
- Weak integration of digital tools.
- Insufficient English-taught courses and mobility programs.

Opportunities:

- Growing demand for data analysts and modelers.
- Participation in international projects and competitions.
- Access to grant funding for program modernization.
- Expanding ties with business and public sectors.

Threats:

- High competition among universities.
- Rapid technology obsolescence.
- Unstable funding.
- Decreasing interest in fundamental disciplines.

Risks and management

Key risks include:

Academic risks:

- Content misalignment with labor market needs.
- Inadequate digital skills among faculty.

Technical risks:

- Insufficient infrastructure for digital tools and software.

Organizational risks:

- Limited employer integration and partnerships.

Financial risks:

- Budget limitations for modernization and research.

Mitigation Measures:

- Regular review of curriculum relevance.
- Faculty training and upskilling.
- Expansion of academic and industry partnerships.
- Diversification of funding sources.

Key Performance Indicators (KPI)

1. Curriculum updates: 30% of courses revised annually.
2. Digital tools: At least 2 new analytics tools introduced per year.
3. Employer collaboration: At least 5 partnership agreements annually.
4. Research activity: 20% annual increase in student projects and publications.

5. Graduate employment: 85% employed in-field within one year.
6. Faculty development: At least 3 trainings or conferences per year.
7. Risk monitoring: Annual assessment and plan adjustment.

Evaluation criteria

Item	Target indicators	Unit measurement	In the planning period				
			2023	2024	2025	2026	2027
1	The share of invited foreign scientists and teachers from the total number of university teachers	%	2	2	2	3	3
2	Number of double degree programs with foreign universities	unit	0	0	1	1	1
3	Number of agreements/memorandums of cooperation with foreign universities from the top 700	unit	0	0	1	1	2
4	Number of publications in foreign scientific journals indexed by Scopus	unit	4	5	5	6	6
5	The share of those employed in the first year after completing their studies from the total number of graduates	%	80	82	84	86	88
6	Satisfaction of students, staff and faculty with university services	%	75	80	85	87	90

Conclusion

The development plan for the educational program 6B04102 for 2024–2028 focuses on strengthening practical and analytical training, enhancing scientific research, and building strong employer and academic partnerships. Continuous monitoring and revision of the plan will ensure timely responses to changes in both internal and external environments.

Head of the Department of M&ME **Turegeldinova A.Zh.**