

**Information on updating the educational programs
of the Faculty of Information Technology and Economics
for the 2024-2025 academic year**

The basis for updating EP 6B01403 "Initial military training"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the use of artificial Intelligence in higher and postgraduate education of the Republic of Kazakhstan, changes were made to the content of the discipline "Information Technology in secondary schools", which affected ON 12.

2. In the disciplines of the university component of the OOD block, topics on the study of the basics of financial literacy were introduced into the integrated program "Fundamentals of Economic and Legal Knowledge" Accordingly, changes have been made to ON 4.

Thus, changes were made to 2 disciplines, which is 3.6% of the total number of disciplines), 2 learning outcomes were changed, which is 14.5%.

The basis for updating EP 6B01404 "Physical culture and sports"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the use of artificial intelligence in higher and postgraduate education of the Republic of Kazakhstan, the content of the discipline "Theory and methodology of the chosen sport" has been amended, which has affected ON 2.

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 14.

Thus, changes were made to 2 disciplines, which is 3.4% of the total number of disciplines, 2 learning outcomes were changed, which is 14.3 %.

The basis for updating EP 6B01509 "Chemistry-Biology"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the use of artificial intelligence in higher and postgraduate education of the Republic of Kazakhstan, changes were made to the content of the disciplines "Innovative technologies for teaching chemistry" and "Modern methods of teaching biology", which affected ON 6.

2. In the disciplines of the university component of the OOD block in the integrated program "Fundamentals of Economic and Legal Knowledge" Topics on the study of the basics of financial literacy have been introduced, and changes have been made to ON 1 accordingly.

Thus, changes were made to 3 disciplines, which is 3.9% of the total number of disciplines, 2 learning outcomes were changed, which is 15.4 %.

The basis for updating EP 6B04116 "Economics"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the Use of Artificial Intelligence in higher and postgraduate education of the Republic of Kazakhstan, changes were made to the contents of the disciplines "Big Data and Business Analytics" and "Cloud Computing Services", which affected ON 8

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" included topics on the study of the basics of financial literacy, respectively, changes were made to ON 10

3. According to the recommendations of social partners, changes were made in the disciplines "Economic Theory" and "Finance", which affected the results of training in ON 4, ON 1

4. According to the ERASMUS project, new disciplines "Circular Economics" and "Economics of Sustainable Development" were included, which was reflected in ON 1, ON 11.

5. In accordance with the professional standard "Activities in the field of planning and analysis of company resources", changes have been made to the contents of the disciplines "Enterprise Economics", "Organization of production" and "Economic analysis".

Thus, changes were made in 10 disciplines (which is 17.2% of the total number of disciplines), 5 learning outcomes were changed, which is 38.5%.

The basis for updating EP 6B04117 "Accounting and auditing"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the Use of Artificial Intelligence in higher and postgraduate education of the Republic of Kazakhstan, changes were made to the content of the disciplines "Big Data and Business Analytics" and "Cloud Computing Services", which affected ON 1

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 14.

3. In accordance with the professional standards "Activities in the field of planning and analysis of company resources" and "Financial Management", changes have been made to the following disciplines: "Finance", "Accounting and Audit", "Financial Management", "Fundamentals of economic analysis", "Valuation of business assets", "Big Data and Business Analytics", "Cloud Computing Service", "Economic Theory" and new disciplines "Circular Economics" and "Economics of Sustainable Development" were added, which influenced the learning outcome ON1,5,10,11,14.

Thus, changes were made in 11 disciplines (which is 18.9% of the total number of disciplines), 6 learning outcomes were changed, which is 40%.

The basis for updating EP 6B04118 "Finance"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the Use of Artificial Intelligence in higher and postgraduate education of the Republic of Kazakhstan, changes were made to the contents of the disciplines "Big Data and Business Analytics" and "Cloud Computing Services", which affected ON 13

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" included topics on the study of the basics of financial literacy, respectively, changes were made to ON 6

3. According to the recommendations of social partners, changes were made in the disciplines "Economic Theory", "Banking" and "Finance", which affected The results of training in ON 2, 8, 10.

4. According to the ERASMUS project, a new discipline "Circular Economics" was included, which was reflected in ON 8.

5. In accordance with the professional standards "Financial Management" and "Activities in the field of planning and analysis of company resources", changes have been made to the contents of the disciplines "Financial Management", "Accounting and Audit" and "Analysis of financial and economic activities".

Thus, changes were made in 10 disciplines (which is 16.7% of the total number of disciplines), 5 learning outcomes were changed, which is 38.5 %.

The basis for updating OP 6B04119 State and local government

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the Use of Artificial Intelligence in higher and postgraduate education of the Republic of Kazakhstan, changes have been made to the content of the discipline "BigDate and Business Analytics" and "Cloud Computing Services", which affected ON 1

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 8

3. According to the recommendations of employers, the content of the discipline "Economic Theory" and "Finance" has been changed, which affected the learning outcome ON 2, 13.

4. According to the ERASMUS project, a new discipline "Economics of sustainable Development" was included, which influenced the result ON 6

5. In accordance with the professional standard "Financial Management", changes were made to the disciplines "Fiscal Policy" and "Finance", which affected the learning outcome ON 12.

6. In accordance with the professional standard "Activities in the field of planning and analysis of company resources", changes were made to the content of the discipline "Fundamentals of economic analysis", which affected the learning outcome ON 13.

Thus, changes were made in 8 disciplines (which is 12.9% of the total number of disciplines), 6 learning outcomes were changed, which is 40%.

The basis for updating EP 6B04120 Management in tourism and hospitality

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the use of artificial intelligence in higher and postgraduate education of the Republic of Kazakhstan in the content of the disciplines "Digital technologies in business", which affected the learning outcome ON 8

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 1

Thus, changes were made in 2 disciplines (which is 2.8% of the total number of disciplines), 2 learning outcomes were changed, which is 16.7 %.

The basis for updating EP 6B05121 "Biotechnology"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the use of artificial intelligence in higher and postgraduate education of the Republic of Kazakhstan, the content of the discipline "Modern methods of biotechnology" has been amended, which has affected ON 4.

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on studying the basics of financial literacy, respectively, changes have been made to ON 12.

3. In accordance with the Atlas of New Professions (Biotechnologist-microbiologist of aquasystems), the disciplines "Ecology of microorganisms", "Microbiomes", "Radiobiology" and "Radioecology" were introduced into the OP, which influenced the change in ON 1,3,4.

4. According to the ERASMUS project, the content of the discipline "Fundamentals of Environmental Biotechnology" was supplemented.

Thus, changes were made in 7 disciplines, which is 12.7% of the total number of disciplines, 4 learning outcomes were changed, which is 33.3%.

The basis for updating EP 6B06102 "Information Systems"

For the 2024-2025 academic year, the following changes have been made:

1. In accordance with the Interuniversity Standard on the use of artificial Intelligence in higher and postgraduate education of the Republic of Kazakhstan, changes have been made to the content of the discipline "Artificial Intelligence Technology", which affected ON 7, 13

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 1.

3. Based on the recommendations of social partners, the disciplines "Database Administration in the MS SQL Server platform" and "Automatic Control Theory" were replaced by the disciplines "Internet of Things" and "Peripheral Computing", which was reflected in ON 7, 9.

Thus, changes were made in 5 disciplines (which is 8.3% of the total number of disciplines), 4 learning outcomes were changed, which is 28.6%.

The basis for updating EP 6B06103 "Artificial Intelligence Engineering and blockchain"

The following changes have been made for the 2024-2025 academic year:

1. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 1.

Thus, changes were made to one discipline (which is 1.6% of the total number of disciplines), 1 learning result was changed, which is 7.1%.

The basis for updating EP 6B06122 "Informatics"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the Use of Artificial Intelligence in higher and postgraduate education of the Republic of Kazakhstan, changes have been made to the content of the discipline "Artificial Intelligence Technology", which has affected ON 9.

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 15.

3. In accordance with the recommendations of employers, instead of the disciplines "Methods of teaching computer science", "Methods and technology of teaching computer science", the disciplines "Java Programming Technology", "Programming Languages" were introduced, which affected the learning outcome ON 7.

4. In accordance with the professional standard "Software developers and testing specialists, WEB and multimedia applications", the disciplines "Theory of languages and automata", "Algorithmic languages and Programming", "Theory of programming languages and translation methods", "High-level programming language" have been replaced by the disciplines "C# programming Language", "Application Design and Development", "No Code Programming", "Low Code Development". These changes did not affect the learning outcomes.

5. In accordance with the recommendations of employers, the disciplines "Applied Software", "Fundamentals of Programming in Python" and "Theory of information Systems" have been replaced by the disciplines "Integrated Software Systems", "Data Analysis and machine Learning" and "Information Protection in information systems". These changes did not affect the learning outcomes.

Thus, changes were made in 11 disciplines (which is 20% of the total number of disciplines), 3 learning outcomes were changed, which is 20%.

The basis for updating EP 6B06123 IT in healthcare

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the use of artificial Intelligence in higher and postgraduate education of the Republic of Kazakhstan, the elective disciplines "Health Informatization" and "Health Information Resources" were replaced by the discipline "Artificial Intelligence in medicine" of the university component, which was reflected in ON 6.

2. According to the professional standard "Software Development", the disciplines "Programming Technologies" and "Database Programming" were replaced by the disciplines "Methods and tools of software development" and "Software Development Tools", which affected the learning outcome ON 11.

3. In accordance with the recommendations of employers, the content of the discipline "Programming Languages" was changed, which was reflected in ON 12, as well as the discipline "Management in Healthcare" was replaced by "Marketing in healthcare".

4. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes have been made to ON5.

Thus, changes were made in 7 disciplines (which is 11.6% of the total number of disciplines), 4 learning outcomes were changed, which is 28.6%.

The basis for updating EP 6B06124 "Computer technology and software"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the use of artificial intelligence in higher and postgraduate education of the Republic of Kazakhstan, the content of the discipline "Artificial Intelligence Technologies" has been changed, which has affected ON 1.

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 14.

3. In accordance with the professional standard "Software Development", changes have been made to the content of the disciplines "Software Development Tools" and "Database Programming", respectively, changes have been made to ON 3, 12.

4. In accordance with the professional standard "System and Network Administration", the content of the discipline "Computer Networks and Telecommunications" has been changed, respectively, changes have been made to ON 4.

Thus, changes were made in 5 disciplines (which is 7.5% of the total number of disciplines), 5 learning outcomes were changed, which is 35.7%.

The basis for updating EP 6B07125 "Electric Power Industry"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the use of artificial intelligence in higher and postgraduate education of the Republic of Kazakhstan, the discipline "Descriptive geometry and engineering graphics using computers" was replaced by the discipline "Descriptive geometry and engineering graphics using computer technology", which was reflected in ON 5.

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 15.

3. According to the recommendations of the social partners, the discipline "Electrical safety in electrical installations" was replaced by the discipline "Electrical drawings and diagrams", respectively, changes were made to ON5.

Thus, changes were made to 3 disciplines (which is 5% of the total number of disciplines), 2 learning outcomes were changed, which is 13.3%.

The basis for updating EP 6B07527 "Standardization, certification and metrology in construction"

The following changes have been made for the 2024-2025 academic year:

1. In accordance with the Interuniversity Standard on the Use of Artificial Intelligence in higher and postgraduate education of the Republic of Kazakhstan, changes were made to the contents of the disciplines "Engineering Graphics" and "Engineering Graphics and descriptive Geometry", which affected ON 11

2. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 1.

3. In accordance with the professional standard "Standardization", "Metrology" and "Assessment in the field of accreditation" in the content of the disciplines "Standardization and certification", "Unified documentation systems", "Unification and standardization of management documents", "Technology for the development of standards and regulatory documentation", "Regulatory framework for standardization and certification", "Standard control of documents in standardization and certification", "International standardization and certification", "Standardization and certification in the Republic of Kazakhstan", "Accreditation of certification bodies and testing laboratories", "General Theory of measurements", "Fundamentals of measurement in construction" and "Measurements in construction" were amended, which affected the results learning in ON 5, 7, 9.

Thus, changes were made in 15 disciplines, which is 25% of the total number of disciplines), 5 learning outcomes were changed, which is 35.7%.

The basis for updating EP 6B11329 - "Organization of transportation, traffic and operation of transport"

The following changes have been made for the 2024-2025 academic year:

1. In the disciplines of the university component of the OOD block, the integrated program "Fundamentals of Economic and Legal Knowledge" includes topics on the study of the basics of financial literacy, respectively, changes were made to ON 15.

3. In accordance with the professional standard "Transportation of goods by road", the discipline "Organization of cargo and commercial work" was replaced by the discipline "Organization of cargo work", the content of disciplines was changed in the disciplines "Ensuring traffic safety" and "Transport logistics", respectively, changes were made to ON 11.

Thus, changes were made to 4 disciplines, which is 6.8% of the total number of disciplines, 2 learning outcomes were changed, which is 13.3%.