

"Kazakh University of Technology and Business" named after K.Kulazhanova" JSC

EDUCATIONAL PROGRAM

7M06139 - «IT management»

Level: Master's degree (1 year profile)

Approved
by the Board of Directors of JSC

«K. Kulazhanov KazUTB» «18» 03 2026,
protocol No. 4



Recommended
by the Academic Council of JSC

«K. Kulazhanov KazUTB» «27» 02 2026,
protocol No. 7

Astana – 2026

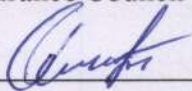
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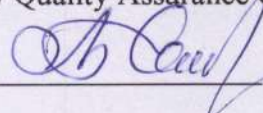
Preface

The educational program 7M06139 "IT Management" was developed in accordance with the State Mandatory Standard of Higher Education / Postgraduate Education, approved by the Order of the Minister of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022 No. 2, as well as on the basis of the professional standard: "Business analyst" No. 770/NK December 6, 2024; Atlas of new professions and competencies in the Republic of Kazakhstan "Product manager"; Regional atlases new professions and competencies of the Karaganda region "Data Scientist".

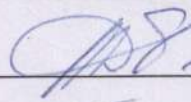
The Educational Program 7M06139 - "IT Management" was approved at the meeting of the Internal Quality Assurance Council on 02 01 2020 Minutes No. 3.

Chairperson  Askarbekov E.B.

The Educational Program «7M06139 - "IT Management" was reviewed and approved at the meeting of the Faculty Quality Assurance Commission on 01 12 2025 Minutes No. 311.

Chairperson  Serimbetov B.A.

The Educational Program «7M06139 - "IT Management" was developed and discussed at the meeting of the Department of Information Technologies on 02 12 2025 Minutes No. 5.

Head of the Department  Abdukarimova A.A.

Approval sheet

Educational program 7M06139 «IT management»

(code and name of the EP)

AGREED:

Vice-Rector for
Administrative Affairs



PP

E. Askarbekov

"22" 01
2026 year

Head of Educational
Programs Department


PP

B. Bayadilova

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Deputy General Director
RSE on REU «Institute
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Director of LLP «Digital
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Director of Business
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LLP


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A. Talgatbekuly

"10" 12
2025 year

Master's student


PP

D. Serikhanov

"10" 12
2025 year

1 Passport of the educational program

The level according to the International Standard Classification of Education (ISCE)	7
National Qualifications Framework level (NQF)	7
The level according to the industry qualifications framework (AIQF)	7
The code and name of the field of education	7M06-Information and communication technologies
EP profile	Profile
The code and name of the training area	7M061- Information and communication technologies
Number and name of the educational program group	M094- Information technology
The code and name of the educational program (EP)	7M06139 - "IT management"
The purpose of the educational program	Preparation of master's degree programs with professional competencies in the field of strategic management of information technologies, IT projects, IT services, data, information security and digital infrastructure of organizations.
The criterion of completion of the EP	At least 60 academic credits, including all types of undergraduate academic activities
The language of instruction of the EP	Russian, Kazakh
Distinctive features of the EP	-
Partner University	-

2 Qualification characteristics of the graduate of the educational program

Degree awarded	Master of Engineering and Technology in the educational program 7M06139 - "IT Management"
Area (sphere) of professional activity	Organizational and managerial: - managing the activities of HR departments and organizations involved in HR projects; - development and implementation of innovative forms of management of organizations, etc. - branches of human activity; Научно-исследовательская: - научные исследования в области информационно-коммуникационных технологий; Project information: - development and maintenance of software for various branches of human activity.
Types of professional activity	Design and engineering; Production and technological; Organizational and managerial; Scientific research and experimental research.
Objects of professional activity	Enterprises and organizations of various forms of ownership, whose activities are related to the development, implementation and maintenance of information technologies and systems in various fields of human activity.
Functions of professional activity (labor functions)	- Business analysis management

3 The structure of the educational program

	Naming of cycles and disciplines	Labor intensity in academic credits
1	Theoretical training	39
1.1	The cycle of basic disciplines (BD)	10
1)	The university component	6
2)	Component of choice	4
1.2	The cycle of profile disciplines (PD)	29
1)	Component of choice	15
2)	Production practice	14
2.	Master's student's research work	13
	Experimental and research work of a master's student, including an internship and a master's project	13
4	Final certification (FC)	8
1)	Design and protection of the master's project	8
	Total	60

4 Competence map of OP 7M06139 – “IT management”

Type of competencies	Learning Outcome Code	The result of the training (according to Bloom's taxonomy)
Behavioral skills and personality traits (Softskills)	LO 1	Applies business communication skills in a foreign language for effective interaction and professional engagement in an international environment.
	LO 2	Implements leadership skills and managerial competencies in decision-making in conditions of uncertainty and global competition.
Digital competencies (Digital skills)	LO 4	Supervises analytical activities within IT projects, leveraging machine learning methods for business process management.
	LO 5	Ensures the security of information systems and data.
Professional skills (Hardskills)	LO 3	Manages IT strategies to drive product development, ensuring market relevance and long-term viability.

5 Learning outcomes of the educational program and modules

Behavioral skills and personality traits (Softskills)	Educational program learning outcomes (LO)	Module name	Has skills in professional communication, management, and behavior analysis in work and management situations.	Name of disciplines
Professional skills (Hardskills)	LO1 Applies business communication skills in a foreign language for effective interaction and professional engagement in an international environment.	The module of basic disciplines	Possesses skills of professional communication, management and organizational processes and application of modern management methods in professional activity	Advanced Management
	LO2 Implements leadership skills and managerial competencies in decision-making in conditions of uncertainty and global competition.			Foreign Language (Professional)
Digital competencies (Digital skills)	LO3 Manages IT strategies to drive product development, ensuring market relevance and long-term viability.	Enterprise management systems, methodologies and standards module	Applies modern methodologies and standards of enterprise management to improve the efficiency of business processes	IT Management
				Enterprise Resource Planning Systems
				Modern Methodologies and Standards of IT Management
				Big Data Processing and Analysis
Digital competencies (Digital skills)	LO 4 Supervises analytical activities within IT projects, leveraging machine learning methods for business process management.	Data analysis and information technology management	Analyzes data, uses modern information technologies and makes informed management decisions based on the results of the analysis.	Machine Learning for Big Data Analysis
				Data Management of Information Systems
				Information Systems Security Management
Digital competencies (Digital skills)	LO 5 Ensures the security of information systems and data.	Data analysis and information technology management	Analyzes data, uses modern information technologies and makes informed management decisions based on the results of the analysis.	Theory of Blockchain Technology

6 The relationship between the attainability of the formed learning outcomes according to the educational program and academic disciplines

№	Name of the discipline	Brief description of the discipline	Number of credits	Generated learning outcomes (codes)				
				LO 1	LO 2	LO 3	LO 4	LO 5
The cycle of basic disciplines (BD)								
1	Advanced Management	The discipline is aimed at developing systemic managerial competencies and leadership potential for organizational management. The curriculum covers the development of leadership influence, the substantiation of strategic business priorities, and the modeling of adaptive management structures. Students apply leadership skills and managerial competencies when making decisions under conditions of uncertainty, risk, and global competition.	3		+			
2	Foreign language (professional)	The discipline is aimed at developing academic communication and intercultural interaction in a global environment. In the course of study, the master's student systematizes specialized information from foreign sources and engages in professional interaction in a foreign language. This enables the effective resolution of production tasks, the preparation of reporting documentation, and the presentation of work results to partners, thereby enhancing the specialist's competitiveness at an international level.	3	+				
3	Big Data Processing and Analysis	The discipline is aimed at studying methods and technologies for working with large volumes of information (or big data). It examines data analysis tools such as Pig and Hive, as well as the MapReduce model. As a result of studying the discipline, the student develops data analysis and	4				+	

		processing algorithms.								
4	Machine Learning for Big Data Analysis	The discipline is aimed at studying methods of analyzing, processing and interpreting large amounts of data using machine learning algorithms. The methods of machine learning and big data analysis, including data processing, model training and quality assessment, are considered. As a result of studying the discipline, the student applies machine learning methods to analyze big data and solve applied problems in various subject areas.	4							+
The cycle of profile disciplines (PD)										
5	Data Management of Information Systems	This discipline is focused on studying methods for data management in information systems, including storage, processing, integration, and security. The course covers database models and architecture, data quality management, data recovery, and optimization techniques. As a result, students will be able to manage data within information systems, ensuring its secure storage, efficient processing, and protection.	5							+
6	Information Systems Security Management	This discipline is focused on studying methods for information systems security management and data protection in the digital environment. The course covers network infrastructure security, vulnerability analysis, and methods for ensuring confidentiality. As a result, students will be able to apply comprehensive security management methods to protect information systems.	5							+
7	Theory of Blockchain Technology	This discipline focuses on the fundamental principles of blockchain systems. The course explores consensus algorithms, cryptographic mechanisms for data security, and the principles of distributed computing architectures and decentralized network management in blockchain environments. As a result, students will be able to	5							+

		ensure data security and transparency through the application of blockchain technology, consensus protocols, and cryptographic methods.							
8	Enterprise Resource Planning Systems	This discipline is focused on the principles and methods of ERP (Enterprise Resource Planning) system implementation for the automation and integration of enterprise business processes. The course explores approaches to resource management and operations optimization aimed at improving organizational efficiency. As a result of studying the discipline, the student applies ERP system implementation methods and optimizes business processes to improve organizational efficiency.	5				+		
9	IT Management	This discipline is focused on studying the principles and methods of Information Technology management. The course covers the fundamentals of IT governance, project management, and the strategic management of an organization's IT infrastructure. As a result, students will be able to apply IT management methodologies and lead IT projects effectively.	5				+		
10	Modern Methodologies and Standards of IT Management	The discipline is aimed at studying approaches and best practices in information technology management, including the methodologies of ITIL, COBIT, Agile, DevOps and others. Tools for lifecycle management of IT services, security, monitoring, risks and optimization of IT processes are considered. As a result of studying the discipline, the student implements the best practices of information technology management using ITIL, COBIT, Agile and DevOps methodologies to optimize processes.	5				+		

7 Alignment of planned learning outcomes with teaching and assessment methods within the module

Learning Outcomes (LO) Number	Planned learning outcomes for the module	Assessment technologies (tools)	Methods of learning and teaching
LO 1	Applies business communication skills in a foreign language for effective interaction and professional engagement in an international environment.	Oral survey (exam, theoretical assessment). Test, Situational problem solving	Information theory (demonstration of educational material, explanation, story)
LO 2	Implements leadership skills and managerial competencies in decision-making in conditions of uncertainty and global competition.	Oral survey (exam, theoretical assessment). Test, Situational problem solving	Information theory (demonstration of educational material, explanation, story)
LO 3	Manages IT strategies to drive product development, ensuring market relevance and long-term viability.	Oral survey (exam, theoretical assessment). Test, presentation	Information theory (demonstration of educational material, explanation, story)
LO 4	Supervises analytical activities within IT projects, leveraging machine learning methods for business process management.	Oral survey (exam, theoretical assessment). Control work. Presentation. A case study. Multi-level tasks and assignments.	Information theory (demonstration of educational material, explanation, story)
LO 5	Ensures the security of information systems and data.	Oral survey (exam, theoretical assessment). Control work. Presentation. A case study.	Search and creative teaching methods (observation, experience, experiment)

8. Correlation of learning outcomes of the educational program with the labor functions of professional standards (if any)

Name of the professional standards used	Professions at level 6 and/or 7 of the SQF	Labor functions	Tasks	Learning outcomes for the educational program
Business analyst	Business analyst in the field of ICT	Labor function 1: Business analysis management.	Skill 2: Guiding Business Analysis	LO 3 Manages IT strategies to drive product development, ensuring market relevance and long-term viability.
Atlas of new professions, Information technology	Product-manager		Key competencies of the profession: - organization of market research to assess the potential demand for a particular product, as well as the search and identification of relevant market demands; - generation of ideas and ways to improve IT products; - ensuring the market viability of the product by maintaining interest in it.	LO 3 Manages IT strategies to drive product development, ensuring market relevance and long-term viability.
Regional atlases of new professions and competencies, Karaganda region	Data Scientist		Skills: knowledge of machine learning algorithms, statistics, programming (often Python or R), ability to work with databases and data visualization tools	LO 4 Supervises analytical activities within IT projects, leveraging machine learning methods for business process management. LO 5 Ensures the security of information systems and data.
Personal competence requirements	Stress tolerance, critical thinking, sociability, rationality, pragmatism, readiness for self-development, authority, emotional balance.			

9. Graduate model

GRADUATE MODEL			
Professional standard "Business Analyst", Atlas of New Professions "Product Manager", Regional Atlases of New Professions and Competencies, Karaganda Region – "Data Specialist (Data Scientist)".	Competencies (soft skills, digital skills)		
	Attributes of a graduate	knowledge	Skills
	- High professionalism in the field of IT technology and business; - Emotional intelligence; - Adaptability to global challenges; - Leadership; - Entrepreneurial thinking; - Global citizenship; - Understanding the importance of principles and culture of academic integrity; - Communication competencies; - Learning skills necessary for independent continuation of further education.	- modern methods and tools for managing IT projects and digital products; - principles of strategic and operational IT management; - methods of business analysis and business process optimization; - data analysis technologies and digital analytics; - information systems architecture, cloud technologies, and cybersecurity fundamentals; - modern digital platforms and information technologies; - regulatory and legal frameworks for digitalization and IT management.	- manage IT projects and digital products; - analyze and improve organizational business processes; - apply data analysis tools for managerial decision-making; - implement modern digital technologies and information systems; - evaluate the effectiveness of IT solutions and digital projects; - organize project team activities and interact effectively with stakeholders; - make managerial decisions in the context of organizational digital transformation.
	Professional skills (hard skills)		
	- Defines the essence and content of the processes of management, management, entrepreneurship and management. - Has the ability to establish communication and decision-making processes; has the ability to choose an effective leadership style and leadership, methods of managing groups, conflicts, and stress. - Possesses communication skills of communicating with colleagues and customers in the process of project development, and also participates in the organization and management of projects. - Calculates and prepares a business plan and project analysis of an investment and business project. - Applies regulations for managing the processes of the IT infrastructure lifecycle and the activities of IT enterprises.		

TYPICAL CURRICULUM
Educational program 7M06139 - "IT management"

ОКУ ПРОЦЕССИНІН ЖОСПАРЫ
ПЛАН УЧЕБНОГО ПРОЦЕССА
PLAN OF EDUCATIONAL PROCESS

Білім беру бағдарламасының коды және атауы :7M06139 - «IT-менеджмент»
Код и наименование образовательной программы: 7M06139 - «IT-менеджмент»
Code and Name of the educational program : 7M06139 - "IT Management"

Модуль № / № модуля / Module №	Пәндік № / № дисциплины / Discipline №	Оқу пәндерінің циклы (міндетті компонент / тапталу компоненті) / Educational disciplines cycle (compulsory component / component of choice)	Оқу пәндерінің коды / Educational discipline code	Семестр / semester	Кредиттер саны / Number of credits	Курсовая жұмыс (жоба) / Course work (project)	Барлық сағат / Барлық сағат / Total hours	Барлық аудит. сағат / Total classroom hours	Аудиториялық жұмыс / оның ішінде / в том числе / including				ОБЖ / СРОП / IWS		ВАЖ / СПО / IWS		Семестр бойынша болу / I COURSE / Academic		Пән бойынша қорытынды бағалау (емтихан, дифференциалды сынақ, мемлекеттік емтихан, жоба және т.б.) / Форма итогового контроля по дисциплине (экзамен, дифференцированный зачет, государственный экзамен, проект и др.) / The format of the final assessment for the discipline (orally, in writing, test, creative, etc.)		Пән бойынша қорытынды бағалаудың форматы (ауызша, жазбаша, тестілік, шығармашылық және т.б.) / Форма проведения итогового контроля по дисциплине (устно, письменно, тест, творческий и т.д.) / The format of the final assessment for the discipline (orally, in writing, test, creative, etc.)																						
									Д / ЛK / Lec	СПС / СПЗ / SPL	ЛС / ЛЗ / LC	12	13	14	15	16	17	18	19	20																							
																						Барлық аудит. сағат / Total classroom hours	Барлық сағат / Барлық сағат / Total hours	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Модуль / Module № 1	1	Жетілдірген менеджмент / Продвинутый менеджмент / Advanced Management	БП (ЖК) / БД (БК) / BD (UC)	PM 5203-26 / PM 5203-26 / PM 5203-26	1	3		90	30	15	15		6	54	Барлық кафедралар / Все кафедры / All chairs	1 + 1 + 0		Емтихан / Экзамен / Examination	Басқа / Другое / More																								
	2	Шет тіл (кәсіби) / Иностранный язык (профессиональный) / Foreign Language (Professional)	БП (ЖК) / БД (БК) / BD (UC)	IYa (P) 5202-26 / IYa (P) 5202-26 / IYa (P) 5202-26	1	3		90	30		30		6	54	Барлық кафедралар / Все кафедры / All chairs	0 + 2 + 0		Емтихан / Экзамен / Examination	Басқа / Другое / More																								
	3	Өндірістік практика / Производственная практика / Industrial Practicum	БП (ЖК) / БД (БК) / BD (UC)	PP 5301-26 / PP 5301-26 / PP 5301-26	2	14		420	0						Барлық кафедралар / Все кафедры / All chairs	14 апта / неделя / weeks		Практика бойынша қорытынды баға / Итоговая оценка по практике / Total mark on practice	Басқа / Другое / More																								
	4	Магистранттың эксперименттік-зерттеу жұмысы / Экспериментально-исследовательская работа магистранта / Experimental Research Work of the Master's Student	ФЗЖ (ЖК) / НИР (БК) / RW (UC)	EIRM 5401-26 / EIRM 5401-26 / EIRM 5401-26	1	5		150	0						Барлық кафедралар / Все кафедры / All chairs	5 апта / неделя / weeks		Ғылыми-зерттеу жұмысы / Исследовательская работа / Research work	Басқа / Другое / More																								

	Тағылымдамадан өту мен магистрлік жұбаны орындауды қамтитын магистранттың эксперименттік-зерттеу жұмысы Экспериментально-исследовательская работа магистранта, включая прохождение стажировки и выполнение магистерского проекта Experimental Research Work of a Master's Student, Including Internship and Master's Project	FЭЖ (ЖК) НИР (БК) RW (LC)	EIRM 5402-26 EIRM 5402-26 EIRM 5402-26	2	8	240	0	15	45	0	12	108	Барлық кафедралар Все кафедры All chairs	8 апта / неделя / weeks	Ғылыми-зерттеу жұмысы Исследовательская работа Research work	Басқа Другое More
Барлығы модуль бойынша / Итого по модулю / Total for module																
Модуль / Module № 2	1	Үлкен деректерді талдауға арналған машиналық оқыту Машинное обучение для анализа больших данных Machine Learning for Big Data Analysis	MOABD 5301-26 MOABD 5301-26 MOABD 5301-26	1	4	120	45	30	15	0	3	72	Ақпараттық технология Информационные технологии Information technology	2 + 1 + 0	Емтихан Экзамен Examination	Басқа Другое More
	2	Үлкен деректерді өңдеу және талдау Обработка и анализ больших данных Big Data Processing and Analysis	OABD 5301-26 OABD 5301-26 OABD 5301-26													
Барлығы модуль бойынша / Итого по модулю / Total for module																
Модуль / Module № 3	1	IT – менеджмент IT – менеджмент IT Management	ITM 5201-26 ITM 5201-26 ITM 5201-26	1	5	150	45	30	15	0	15	90	Ақпараттық технология Информационные технологии Information technology	2 + 1 + 0	Емтихан Экзамен Examination	Басқа Другое More
	2	Қоспорлар ресурстарын жоспарлау жүйелері Системы планирования ресурсов предприятия Enterprise Resource Planning Systems	SPRP 5201-26 SPRP 5201-26 SPRP 5201-26													
Барлығы модуль бойынша / Итого по модулю / Total for module																
Модуль / Module № 4	1	IT менеджменттің заманауи әдістері мен стандарттары Современные методологии и стандарты IT менеджмента Modern Methodologies and Standards of IT Management	SMSITM 5302-26 SMSITM 5302-26 SMSITM 5302-26	1	5	150	45	30	15	0	15	90	Ақпараттық технология Информационные технологии Information technology	2 + 1 + 0	Емтихан Экзамен Examination	Басқа Другое More
	2	Блокчейн технологиясының теориясы Теория технологий блокчейн Theory of Blockchain Technology	TTB 5302-26 TTB 5302-26 TTB 5302-26													
Барлығы модуль бойынша / Итого по модулю / Total for module																
Модуль / Module № 5	1	Ақпараттық жүйелердің қауіпсіздігін басқару Управление безопасностью информационных систем Information Systems Security Management	UBIS 5303-26 UBIS 5303-26 UBIS 5303-26	1	5	150	45	30	15	0	15	90	Ақпараттық технология Информационные технологии Information technology	* 2 + 1 + 0	Емтихан Экзамен Examination	Басқа Другое More
	2	Ақпараттық жүйелер деректерін басқару Управление данными информационных систем Data Management of Information Systems	UDIS 5303-26 UDIS 5303-26 UDIS 5303-26													
Барлығы модуль бойынша / Итого по модулю / Total for module																
Қорытынды аттестация / Итоговая аттестация / Final assessment																

Модуль / Module №	Қорытынды аттестаттау (Магистрлік диссертацияны ресімдеу және қорғау) (МДРҚ)	Итоговая аттестация (Оформление и защита магистерской диссертации) (ОиЗМД)	Final assessment (Preparation and defense of a master's thesis) (PDMT)	2	8	240	0	0	0	0	0	0	0	0	0	0	6 апта / неделя / weeks		
1																			
Барлығы модуль бойынша / Итого по модулю / Total for module																			
Барлығы модульдар бойынша / Итого по модулям / TOTAL FOR MODULES					60	1800	240	135	105	0	60	450							

EXPERT OPINION

on the Educational Program 7M06139 «IT Management» Research-Oriented Master's Degree Program of JSC «Kazakh University of Technology and Business»

The educational program (hereinafter referred to as the EP) 7M06139 "IT Management" of the scientific and pedagogical direction, implemented at the JSC "K. Kulazhanov Kazakh University of Technology and Business", is a system of educational and methodical documents regulating the goals, expected results, content, conditions and technologies for implementing the educational process, the system for assessing the quality of graduate training, and complies with the regulatory legal acts of the Ministry of Science and Higher Education of the Republic of Kazakhstan (MSHE RK).

The EP was developed and approved in accordance with the requirements of the State Mandatory Standards of Higher and Postgraduate Education (Order No. 2 of the Ministry of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022, with amendments and additions as of February 20, 2023), as well as on the basis of sectoral qualification frameworks.

The objective of the educational program 7M06139 «IT Management» is to train specialists capable of effectively managing information technologies and IT resources across diverse organizations.

The mandatory component of the professional educational program is aimed at developing managerial and communication competencies, which include the ability to plan and organize team workflow using modern management and business communication principles, as well as to analyze and monitor the operational activities of a department. The elective component of the educational program provides an opportunity to expand and deepen training, as well as to acquire additional competencies, skills, and knowledge necessary to ensure the graduate's competitiveness in accordance with labor market demands.

The implementation of the educational program is ensured by qualified teaching staff engaged in research and educational-methodical activities. Faculty members holding academic degrees and titles are involved in teaching the professional cycle disciplines.

The modules of the educational program 7M06139 «IT Management» provide comprehensive theoretical and practical training in IT management, data analysis, and information technology governance, as well as a module on systems, methodologies, and enterprise management standards.

Practical skills are developed through the following disciplines: Information Systems Security Management and Information Systems Data Management.

Due to the rapid advancement of artificial intelligence technologies and big data analytics, combined with the growing labor market demand for specialists proficient in intelligent data processing methodologies, a new course titled «Machine Learning for Big Data Analysis» has been incorporated into the 7M06139 «IT Management» educational program.

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All course modules ensure the mastery of modern methods for managing and analyzing IT processes.

1. **Universal competencies:** general professional, social-personal, and socio-cultural.

2. **Professional competencies:** analytical, design, operational-technological, organizational-managerial, and research-focused.

Professional competencies correspond to the areas and tasks of professional activity and include:

1. The ability to formulate ICT utilization strategies across various subject areas and forecast potential development trends for these strategies.

2. Knowledge and understanding of the specific core domains and objects of IT management, the nature of client business goals and activities, as well as the principles of business process reengineering and optimization.

3. The ability to design information processes and systems using innovative software tools and instruments.

4. Proficiency in modern information technologies for managerial decision-making, coupled with leadership capabilities to plan, manage, and control requirement execution; conduct assessments of complexity, risks, budget, and time constraints throughout the project lifecycle; monitor the project schedule; and maintain the information system across all stages of its lifecycle.

5. The ability to utilize and advance scientific research methodologies in the field of emerging technologies for information systems design and development within applied domains.

Based on the provided expertise, the following conclusions can be drawn:

- The program submitted for review meets the requirements of the State Compulsory Educational Standards of the Republic of Kazakhstan (SOES RK);

- The structural elements of the program are implemented in accordance with the competence-based approach;

- The curriculum disciplines logically reflect the scope of the 7M06139 «IT Management» specialization profile, taking into account interdisciplinary connections;

- The teaching and methodological support includes course syllabi, course descriptions, assessment toolkits, as well as internships and final state certification programs;

- The institutional environment of the university and the faculty ensures the development of the graduate's socio-cultural competencies.

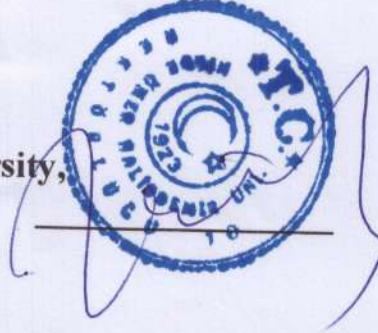
Recommendations for improving the educational program: Given the constant dynamic changes in information and communication technology methods and tools, it is recommended to update elective courses by 10% annually. This update should align with the graduate competencies of the educational program 7M06139 «IT Management», market economy requirements, and employer demands.

2

Conclusions:

- The educational program is recommended for integration into the academic process;
- The structure and content of the educational program 7M06139 «IT Management» are focused on meeting the needs of the labor market and employers, align with comparable Master's degree programs within the European Higher Education Area (EHEA), and ensure the achievement of the expected learning outcomes.

**Professor, PhD,
Niğde Ömer Halisdemir University,
Niğde, Türkiye**



Nezih Önal

EXPERT OPINION

on the Educational Program 7M06139 «IT Management» Research-Oriented Master's Degree Program of JSC «Kazakh University of Technology and Business»

The educational program (hereinafter referred to as the EP) 7M06139 "IT Management" of the scientific and pedagogical direction, implemented at the JSC "K. Kulazhanov Kazakh University of Technology and Business", is a system of educational and methodical documents regulating the goals, expected results, content, conditions and technologies for implementing the educational process, the system for assessing the quality of graduate training, and complies with the regulatory legal acts of the Ministry of Science and Higher Education of the Republic of Kazakhstan (MSHE RK).

The EP was developed and approved in accordance with the requirements of the State Mandatory Standards of Higher and Postgraduate Education (Order No. 2 of the Ministry of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022, with amendments and additions as of February 20, 2023), as well as on the basis of sectoral qualification frameworks.

The objective of the educational program 7M06139 «IT Management» is to train specialists capable of effectively managing information technologies and IT resources across diverse organizations.

The mandatory component of the professional educational program is aimed at developing managerial and communication competencies, which include the ability to plan and organize team workflow using modern management and business communication principles, as well as to analyze and monitor the operational activities of a department. The elective component of the educational program provides an opportunity to expand and deepen training, as well as to acquire additional competencies, skills, and knowledge necessary to ensure the graduate's competitiveness in accordance with labor market demands.

The implementation of the educational program is ensured by qualified teaching staff engaged in research and educational-methodical activities. Faculty members holding academic degrees and titles are involved in teaching the professional cycle disciplines.

The modules of the educational program 7M06139 «IT Management» provide comprehensive theoretical and practical training in IT management, data analysis, and information technology governance, as well as a module on systems, methodologies, and enterprise management standards.

Practical skills are developed through the following disciplines: Information Systems Security Management and Information Systems Data Management.

Due to the rapid advancement of artificial intelligence technologies and big data analytics, combined with the growing labor market demand for specialists proficient in intelligent data processing methodologies, a new course titled «Machine Learning for Big Data Analysis» has been incorporated into the 7M06139 «IT Management» educational program.

All course modules ensure the mastery of modern methods for managing and analyzing IT processes.

1. **Universal competencies:** general professional, social-personal, and socio-cultural.
2. **Professional competencies:** analytical, design, operational-technological, organizational-managerial, and research-focused.

Professional competencies correspond to the areas and tasks of professional activity and include:

1. The ability to formulate ICT utilization strategies across various subject areas and forecast potential development trends for these strategies.

2. Knowledge and understanding of the specific core domains and objects of IT management, the nature of client business goals and activities, as well as the principles of business process reengineering and optimization.

3. The ability to design information processes and systems using innovative software tools and instruments.

4. Proficiency in modern information technologies for managerial decision-making, coupled with leadership capabilities to plan, manage, and control requirement execution; conduct assessments of complexity, risks, budget, and time constraints throughout the project lifecycle; monitor the project schedule; and maintain the information system across all stages of its lifecycle.

5. The ability to utilize and advance scientific research methodologies in the field of emerging technologies for information systems design and development within applied domains.

Based on the provided expertise, the following conclusions can be drawn:

- The program submitted for review meets the requirements of the State Compulsory Educational Standards of the Republic of Kazakhstan (SOES RK);
- The structural elements of the program are implemented in accordance with the competence-based approach;
- The curriculum disciplines logically reflect the scope of the 7M06139 «IT Management» specialization profile, taking into account interdisciplinary connections;
- The teaching and methodological support includes course syllabi, course descriptions, assessment toolkits, as well as internships and final state certification programs;
- The institutional environment of the university and the faculty ensures the development of the graduate's socio-cultural competencies.

Recommendations for improving the educational program: Given the constant dynamic changes in information and communication technology methods and tools, it is recommended to update elective courses by 10% annually. This update should align with the graduate competencies of the educational program 7M06139 «IT Management», market economy requirements, and employer demands.

Conclusions:

- The educational program is recommended for integration into the academic process;
- The structure and content of the educational program 7M06139 «IT Management» are focused on meeting the needs of the labor market and employers, align with comparable Master's degree programs within the European Higher Education Area (EHEA), and ensure the achievement of the expected learning outcomes.

Head of «SAUDA TECHNOLOGIES» LLP

A.R. Muratkan

Date: 30 . 06 .2026



EXPERT CONCLUSION

on the Educational Program 7M06139 “IT Management”

The educational program 7M06139 “IT Management” of the profile direction, implemented at the NJSC “Kazakh University of Technology and Business” named after K. Kulazhanov, represents a set of academic and methodological documents defining the objectives, content, learning outcomes, conditions for the implementation of the educational process, and the system for assessing the quality of master’s students’ training.

The educational program was developed and approved in accordance with the requirements of the State Compulsory Standard of Higher and Postgraduate Education (Order No. 2 of the Ministry of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022, as amended and supplemented), as well as taking into account sectoral qualification frameworks.

The objective of the educational program is to train master’s graduates with professional competencies in strategic IT management, IT project and IT service management, data management, information security, and digital infrastructure of organizations.

The program content ensures the development of managerial, analytical, project-based, and organizational-professional competencies. The educational modules are aimed at mastering modern methods of IT process management and analysis, information systems management, data management, and information security. As part of the modernization of the educational program, the discipline “Machine Learning for Big Data Analysis” was introduced to develop competencies in intelligent data processing, artificial intelligence, and modern analytical technologies that are in demand in the labor market.

The implementation of the educational program is supported by qualified academic staff holding academic degrees and possessing experience in research and academic-methodological activities. Educational and methodological support includes course syllabi, course descriptions, assessment tools, internship programs, and final assessment materials.

The expert review established that the structure and content of the educational program comply with the requirements of the State Compulsory Educational Standard of the Republic of Kazakhstan, are based on a competency-based approach, and ensure the achievement of the expected learning outcomes. The content of the courses corresponds to the program profile and current requirements of the IT industry.

Recommendations: Regularly update the content of the educational program in accordance with changes in the labor market, the development of artificial intelligence, digitalization, and current employer requirements.

Conclusion: The educational program 7M06139 “IT Management” complies with regulatory requirements, ensures the development of in-demand professional competencies, and is recommended for implementation with further updating of its content in accordance with labor market needs.

Director

AI- TREND SCHOOL LLP  **Makhmetov T. S.**

