



**EDUCATIONAL PROGRAM**

**7M06137 - «IT-management»**


*Level: Master's (scientific and pedagogical)*



Approved  
by the Board of Directors of JSC «K.Kulazhanov  
KazUTB» «02» 04 2025, protocol No. 3

Recommended  
by the Academic Council of JSC «K.Kulazhanov  
KazUTB» «28» 03 2025, protocol No. 8

**Astana – 2025**

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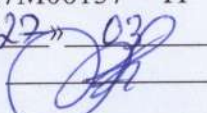
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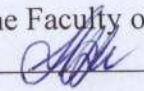
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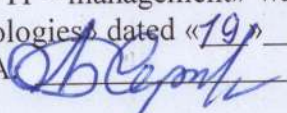


### The preface

The educational program «7M06137 – IT - management» was developed in accordance with the requirements of the State Mandatory Standard of Higher and Postgraduate Education, approved by Order No. 2 of the Minister of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022.

The educational program «7M06137 – IT - management» was approved at the meeting of the Council on Academic Quality on «22» 03 2025, protocol No. 4  
Chairman Baibolova L.K. 

The educational program «7M06137 – IT - management» was approved at the meeting of the Commission on Academic Quality of the Faculty on «Technology» 29.11 2024, protocol No. 2  
Chairman Zhunusova G. S. 

The educational program «7M06137 – IT - management» was developed and discussed at the meeting of the department «Information technologies» dated «19» 11 2024, protocol No. 4  
Head of the department Serimbetov B.A. 



**Approval sheet**

Educational program «7M06137 - IT management »  
(code and name of the EP)

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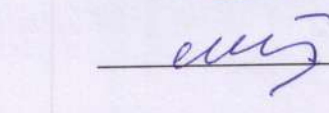
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### 1 Passport of the educational program

International Standard Classification of Education (ISCED) level	7
National Qualifications Framework (NQF) level	7
Sectoral Qualifications Framework (SQF) level	7
Code and name of the field of education	7M06-Information and communication technologies
Direction of training	7M061- Information and communication technologies
Number and name of the group of educational programs	M094- Information technology
Code and name of the educational program (EP)	7M06137 - "IT management"
Educational program profile	Scientific and pedagogical
Goal of the educational program	Training of specialists with knowledge and skills for effective management of information technologies and projects in various organizations, formation of a deep understanding of the principles and methods of IT management, including strategic planning, project management, data analysis, information security and innovative technologies.
Completion criterion of an educational program	At least 120 academic credits, including all types of student's academic activities
The language of instruction of the EP	Russian, Kazakh
Distinctive features of the EP	Accreditation of the OP by the International Accreditation Agency for Quality Assurance of Education IAAR
Partner University	-

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## 2 Qualification characteristics of the graduate of the educational program

Degree awarded	Master of Engineering and Technology in the educational program 7M06137 - "IT Management"
Field of professional activity	<p>Organizational and managerial:</p> <ul style="list-style-type: none"> <li>- managing the activities of HR departments and organizations involved in HR projects;</li> <li>- development and implementation of innovative forms of management of organizations, etc.</li> <li>- branches of human activity;</li> </ul> <p>Scientific research:</p> <ul style="list-style-type: none"> <li>- - scientific research in the field of information and communication technologies;</li> </ul> <p>Project information:</p> <ul style="list-style-type: none"> <li>- development and maintenance of software for various branches of human activity.</li> </ul> <p>Pedagogical:</p> <ul style="list-style-type: none"> <li>- implementation of educational services in the field of information and communication technologies</li> </ul>
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)	<p>A specialist of the highest level of qualification in accordance with his official duties in the field of IT management:</p> <ul style="list-style-type: none"> <li>- Head of IT projects in the field of software product development and maintenance;</li> <li>- Head of Computer Systems and Networks Administration;</li> <li>- Head of the Hardware and Software Security Group.</li> </ul>




### 3 Requirements for the content of the educational program

<b>Name of cycles and disciplines</b>	<b>Workload in academic credits</b>
<b>Naming of cycles and disciplines</b>	<b>88</b>
<b>Cycle of basic disciplines (BD)</b>	<b>35</b>
University component, including pedagogical practice	20
Component of choice	15
<b>Cycle of profile disciplines (PD)</b>	<b>53</b>
University component	10
Component of choice	30
Research practice	13
<b>Research work of a master's student, including an internship and the completion of a master's thesis</b>	<b>24</b>
<b>(Registration and defense of the Master's Degree project (MIS))</b>	<b>8</b>
<b>Total</b>	<b>120</b>

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#### 4 Competency map of the educational program 7M06137 – “IT management”

Competence map of the educational program	Learning Outcome Code	Learning Outcome (according to Bloom's Taxonomy)
Behavioral skills and personality traits (Softskills)	LO1	Conducts research in the field of information technology based on a holistic systematic scientific worldview using knowledge of the history and philosophy of science.
	LO2	Uses modern methods and technologies of scientific and professional communication in a foreign language in the field of professional activity.
	LO3	Applies knowledge of psychology in solving managerial tasks and in planning professional and personal development.
	LO4	Applies knowledge of the methodological foundations of higher school pedagogy, professional knowledge and skills in the training and socialization of students.
Digital competencies (Digital skills)	LO6	Plans work on system analysis, taking into account assumptions, limitations and dependencies in the organization's IT projects.
	LO9	Effectively uses Internet communications in various fields, including education, and uses blockchain technologies to ensure data security and transparency.
Professional skills (Hardskills)	LO5	He has the skills of modern methodologies and standards in optimizing processes in the field of management of HR projects and changes, development of HR strategies.
	LO7	Monitors the performance of system analysis work by managing the organization's IT projects.
	LO8	He is proficient in modern management decision technologies and has the abilities of a leader: to plan, manage and control the fulfillment of requirements.

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### 5 Learning outcomes of the educational program and modules


Behavioral skills and personality traits (Softskills)	Learning Outcomes (LO) for the educational program	Name of module	Learning outcomes for the module	Name of disciplines that form learning outcomes
	<p><b>LO1</b> Conducts research in the field of information technology based on a holistic systematic scientific worldview using knowledge of the history and philosophy of science.</p>	The module of basic disciplines	As a result of the training, the teaching staff of the academic and professional community in foreign language. It is based on the philosophy of mousetrap, pedagogy of higher schools and psychology of Management, which contributes to the development of critical mousetrap and the adoption of approved administrative decisions. It demonstrates readiness for training, scientific work and effective interaction in the multidisciplinary environment.	Foreign language (professional)
	<p><b>LO2</b> Uses modern methods and technologies of scientific and professional communication in a foreign language in the field of professional activity</p>			
	<p><b>LO3</b> Applies knowledge of psychology in solving managerial tasks and in planning professional and personal development.</p>			Higher school pedagogy
	<p><b>LO4</b> Applies knowledge of the methodological foundations of higher school pedagogy, professional knowledge and skills in the training and socialization of</p>			Management psychology

Professional skills (Hardskills)	<p><b>LO5</b> He has the skills of modern methodologies and standards in optimizing processes in the field of management of HR projects and changes, development of HR strategies.</p>	<p>Module Enterprise management systems, methodologies and standards</p>	<p>He is proficient in modern approaches to IT and digital technology management in an organization, applies analytical, managerial and technical tools to make informed decisions, improve the efficiency of business processes and ensure information security, understands how to build an IT development strategy, manage data and use intelligent technologies to support business management and transformation.</p>	<p>IT consulting</p> <p>Modern Methodologies and Standards IT Management</p> <p>Strategic management of information technologies</p> <p>IT - management</p>
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Module of compulsory disciplines	Edition 4	

		Module of compulsory disciplines	Possesses knowledge and skills in the analysis, design and development of information systems, manages IT projects at different stages of their life cycle.	IT project and Change management
Digital competencies (Digital skills)	LO 6 Plans work on system analysis, taking into account assumptions, limitations and dependencies in the organization's IT projects.	Data analysis and information technology management	He is proficient in data analysis and management tools, applies data processing, visualization and interpretation methods to support decision-making, uses digital technologies and analytical approaches to improve business efficiency.	Big Data processing and analysis Applied Information Theory
		Module Enterprise management systems, methodologies and standards	He is proficient in modern approaches to IT and digital technology management in an organization, applies analytical, managerial and technical tools to make informed decisions, improve the efficiency of business processes and ensure information security, understands how to build an IT development strategy, manage data and use intelligent technologies to support business management and transformation.	DataScience  Deep Machine Learning and Artificial Intelligence
Professional skills (Hardskills)	LO7 Monitors the performance of system analysis work by managing the organization's IT projects	Module Enterprise management systems, methodologies and standards	He is proficient in modern approaches to IT and digital technology management in an organization, applies analytical, managerial and technical tools to make informed decisions, improve the efficiency of business	Models and methods of decision support  Effective management models

Educational program		processes and ensure information security, understands how to build an IT development strategy, manage data and use intelligent technologies to support business management and transformation.	Enterprise resource planning systems
<p><b>LO8</b> He is proficient in modern management decision technologies and has the abilities of a leader: to plan, manage and control the fulfillment of requirements</p>	Data analysis and information technology management	He is proficient in data analysis and management tools, applies data processing, visualization and interpretation methods to support decision-making, uses digital technologies and analytical approaches to improve business efficiency.	Software Engineering
	Module of compulsory disciplines	Possesses knowledge and skills in the analysis, design and development of information systems, manages IT projects at different stages of their life cycle.	Analysis, design and planning of IS
	Module Enterprise management systems, methodologies and standards	He is proficient in modern approaches to IT and digital technology management in an organization, applies analytical, managerial and technical tools to make informed decisions, improve the efficiency of business processes and ensure information security, understands how to build an IT development strategy, manage data and use intelligent technologies to support business management and transformation.	Models and methods of neural networks
<p><b>LO 9</b> Effectively uses Internet communications in various fields, including education, and uses blockchain technologies</p>	Data analysis and information technology management	He is proficient in data analysis and management tools, applies data processing, visualization and interpretation methods to	Internet technologies in education

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to ensure data security and transparency.	<p>support decision-making, uses digital technologies and analytical approaches to improve business efficiency.</p> <p>He is proficient in modern approaches to IT and digital technology management in an organization, applies analytical, managerial and technical tools to make informed decisions, improve the efficiency of business processes and ensure information security, understands how to build an IT development strategy, manage data and use intelligent technologies to support business management and transformation.</p>	<p>support decision-making, uses digital technologies and analytical approaches to improve business efficiency.</p> <p>He is proficient in modern approaches to IT and digital technology management in an organization, applies analytical, managerial and technical tools to make informed decisions, improve the efficiency of business processes and ensure information security, understands how to build an IT development strategy, manage data and use intelligent technologies to support business management and transformation.</p>	<p>Internet Communications management</p> <p>Theory of blockchain technology</p> <p>Information systems security management</p> <p>Data management of information systems</p>
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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	LO 6	LO 7	LO 8	LO 9
<b>The cycle of basic disciplines (BD)</b>												
1	Foreign language (professional)	The purpose of the course is to acquire and improve competence in accordance with international standards of foreign language education, allowing the use of a foreign language as a means of communication in the intercultural, professional and scientific activities of the future master. The study of the discipline contributes to the training of highly qualified specialists who are able to compete in the labor market.	4		+							
2	History and philosophy of science	The purpose of studying the discipline is to philosophically comprehend science, comprehend the factual and ideological content of the stages of its development with the further use of acquired knowledge and skills in theoretical and practical professional activities. The course focuses on analyzing the main philosophical and methodological problems that arise in science at the present	4	+								



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	stage of its development, and gaining insight into the trends in the historical development of science.																			
3	Higher school pedagogy	The purpose of the discipline is the formation of basic knowledge and skills of scientific research, their practical use in real pedagogical activity as a necessary basis for the formation of a comprehensively developed, socially active, creatively thinking individual. The content of the discipline is focused on the formation of pedagogical competence in the field of pedagogy of higher school, the creation of a systematic view of the development of pedagogy of higher school as a sphere of scientific knowledge.	4																	
4	Management psychology	The purpose of the discipline is aimed at creating holistic ideas about the role of the human factor in management processes and its psychological mechanisms, systematizing theoretical and methodological approaches to the management process, and developing a systematic vision of the problem of human management in an organization. The content of the discipline allows us to develop psychological tools for effective management of leadership in a modern organization, which is important in the system of basic professional training of	4																	



5	Internet technologies in education	<p>future specialists.</p> <p>The discipline is aimed at studying digital tools and online services used in educational activities. The discipline examines the possibilities of using electronic platforms, distance learning systems, cloud technologies, and educational applications. Special attention is paid to the development and implementation of interactive educational materials, online courses and digital educational resources. Methods of organizing interaction between teachers and students in an online environment are also being studied. The skills of designing a digital educational environment and evaluating the effectiveness of using Internet technologies in teaching are being mastered. The acquired knowledge allows us to apply modern software solutions to improve the quality and accessibility of education.</p>	5									
6	Big Data processing and analysis	<p>The discipline studies key methods and technologies for working with large amounts of information, including distributed computing systems (Hadoop, Apache Spark) and data storage components (HDFS, HBase). Data analysis tools such as Pig and Hive, as well as the MapReduce model, are considered. Promotes the development of skills in developing algorithms for data</p>	5									





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Communications management	<p>principles, tools and strategies of effective interaction in the digital environment. Special attention is paid to modern Internet communication channels such as social networks, instant messengers, e-mail, blogs and corporate platforms. The discipline examines the methods of creating, promoting, and analyzing digital content. The features of the audience's communication behavior on the Internet and the mechanisms of forming the image of a company or brand in the online space are also studied. They master the skills of managing digital projects, planning communication campaigns and evaluating their effectiveness.</p>					
10 DataScience	<p>The discipline examines methods of data collection, processing and analysis, including statistics, machine learning and working with big data, machine learning algorithms, visualization methods, data analysis and the construction of predictive models. It helps to develop skills in developing analytical solutions, applying advanced data processing techniques and creating effective models to solve real-world problems in various fields.</p>	5			+	
<b>The cycle of profile disciplines (PD)</b>						
11 Analysis, design and	<p>The discipline studies methods of analysis, modeling, and IP design for effective data</p>	5				+



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<p>planning of IS</p>	<p>and process management. The concepts of system analysis, IP architecture, methods of object-oriented, structural design, data modeling, processes are considered. Notations and tools for describing business processes (BPMN, UML, ER diagrams), integration methods, IP optimization, software development lifecycle, application of modern design technologies, development of IP models, requirements analysis, construction of architectural solutions, automation of business processes are studied.</p>					
<p>12 IT project and Change management</p>	<p>The discipline is aimed at studying modern approaches and methods of project management in the field of information technology. Special attention is paid to planning, monitoring, risk assessment and resource management in the framework of IT projects. The discipline examines methodologies such as Waterfall, Agile, Scrum, Kanban, and others. The principles and practices of change management arising from the introduction of new technological solutions are also being studied. Students learn to analyze business needs, formulate project goals, and build effective collaboration between team members. Mastering the discipline contributes to the formation of managerial and analytical skills</p>	<p>5</p>		<p>+</p>		









Management	<p>Library), COBIT (Control Objectives for Information and Related Technologies), Agile, DevOps, and others that help effectively manage IT resources and provide high-quality service. The course covers processes and tools for managing the lifecycle of IT services, monitoring, security, risks, and optimizing IT processes. Special attention is paid to the implementation and adaptation of standards in the context of rapidly changing technologies and business requirements.</p>										
20 Strategic management of information technologies	<p>The discipline is aimed at developing students' systematic understanding of the role of information technology in achieving the strategic goals of the organization. Within the framework of the discipline, approaches to the development of an OT strategy, alignment of OT and business goals, as well as evaluation of the effectiveness of OT initiatives are studied. Special attention is paid to the issues of digital transformation, innovation and management of OT architecture. Strategic analysis tools, decision-making models, and management mechanisms for HR projects at the enterprise level are considered. It studies analyzing the business environment, developing business strategies and evaluating their impact on the competitiveness of the organization.</p>	5					+				



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21	Theory of blockchain technology	<p>The discipline studies the basic principles and theoretical foundations of blockchain systems. It examines consensus algorithms, mechanisms for ensuring data security using cryptography, as well as the basics of distributive and distributed computing. Special attention is paid to the theoretical models that underlie cryptocurrencies and smart contracts, as well as their interaction within the framework of blockchain networks. In addition, the discipline explores the impact of blockchain technologies on various industries such as finance, law, and business.</p>	5								+
22	Information systems security management	<p>The discipline studies methods of information system security management and data protection in a digital environment. The principles of cybersecurity, threat models, authentication methods, access control, cryptographic algorithms, and monitoring are considered. Network infrastructure protection technologies, vulnerability analysis, confidentiality, information integrity, information security standards, development and implementation of cyber defense strategies, risk management, audit, compliance with regulatory requirements, the use of threat analysis tools, and incident response in corporate systems are studied.</p>	5								+



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23	Data management of information systems	<p>The discipline studies methods of data management in IP, storage, processing, integration, protection. Data models, database architecture, ETL technologies, data quality management, optimization methods, and information recovery are considered. The principles of building data warehouses, big data processing, metadata management, distributed database technologies, cloud storage, the use of data analysis and visualization tools, access control, information security, and the development of data storage and use strategies in corporate and cloud systems are studied.</p>	5									+
24	IT - management	<p>The discipline is aimed at studying the principles and methods of managing information technologies in organizations. It covers topics related to the development and implementation of IT strategies, management of IT resources, projects, and data security, as well as the optimization of business processes using modern technologies.</p>	5				+					


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

Learning Outcomes (LO) Number	Planned learning outcomes for the module	Assessment technologies (tools)	Methods of learning and teaching
LO 1	Conducts research in the field of information technology based on a holistic systematic scientific worldview using knowledge of the history and philosophy of science	Information theory (demonstration of educational material, explanation, story)	Oral survey (exam, theoretical assessment). Test, Situational problem solving
LO 2	Uses modern methods and technologies of scientific and professional communication in a foreign language in the field of professional activity	Information theory (demonstration of educational material, explanation, story)	Oral survey (exam, theoretical assessment). Test, Situational problem solving
LO 3	Applies knowledge of psychology in solving managerial tasks and in planning professional and personal development	Information theory (demonstration of educational material, explanation, story)	Oral survey (exam, theoretical assessment). Test, presentation
LO 4	Applies knowledge of the methodological foundations of higher school pedagogy, professional knowledge and skills in the training and socialization of students	Information theory (demonstration of educational material, explanation, story)	Oral survey (exam, theoretical assessment). Control work. Presentation. A case study. Multi-level tasks and assignments.
LO 5	He has the skills of modern methodologies and standards in optimizing processes in the field of management of HR projects and changes, development of HR	Search and creative teaching methods (observation, experience, experiment)	Oral survey (exam, theoretical assessment). Control work. Presentation. A case



	strategies		study.
LO 6	Plans work on system analysis, taking into account assumptions, limitations and dependencies in the organization's IT projects.	Search and creative teaching methods (observation, experience, experiment)	Oral survey (exam, theoretical assessment). Project defense, colloquium
LO 7	Monitors the performance of system analysis work by managing the organization's IT projects	Search and creative teaching methods (observation, experience, experiment)	Oral survey (exam, theoretical assessment).
LO 8	He is proficient in modern management decision technologies and has the abilities of a leader: to plan, manage and control the fulfillment of requirements	The method of independent work (reading, examination) Search and creative learning methods (observation, experience, experiment)	Project colloquium Project defense,
LO 9	Effectively uses Internet communications in various fields, including education, and uses blockchain technologies to ensure data security and transparency.	Search and creative learning methods (observation, experience, experiment)	Oral survey (exam, theoretical assessment).


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**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 7 of the SQF	Labor functions	Tasks	Learning outcomes for the educational program
Creation and management of information technologies	Project Manager in the field of information technology	Labor function 1: Organization of work on projects in the field of  Labor function 2: Coordination of work on IT projects	Task 1: IT project Management  Task 3: Coordinating the work of system analysts, programmers, and other specialists	LO 5 Organizes work on projects in the field of IT, ensuring the integration of modern information technologies into production processes.  LO 8 He is proficient in modern management decision technologies and has the abilities of a leader: to plan, manage and control the fulfillment of requirements
Personal competence requirements	Analytical thinking; critical analysis; stress tolerance; responsibility; organization; learning ability; ability to work in a team.			




<p>Teacher (faculty) of organizations of higher and (or) postgraduate education</p>			<p>LO 4 Applies knowledge of the methodological foundations of higher school pedagogy, professional knowledge and skills in the training and socialization of students</p>
<p>Business Intelligence and IT project Management</p>	<p>System Analyst</p>	<p>Labor function 1: Planning and monitoring of system analysis work</p>	<p>Task 1: Planning work on system analysis  Task 2 Monitoring the performance of work on system analysis</p> <p>LO 6 Plans work on system analysis, optimizing the use of resources and technologies, monitoring their implementation</p> <p>LO 7 Monitors the performance of system analysis work by managing the organization's IT projects</p>
<p>Personal competence requirements</p>	<p>Responsibility, strategic thinking, flexibility of thinking, analytical thinking, logical thinking, sense of duty, result orientation, organization, creativity, problem solving</p>		

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### 9. Graduate model

GRADUATE MODEL			
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">           Creation and management of information technologies No. 259 dated December 24, 2019            Business intelligence and IT project management from 05.12.2018.            Teacher (faculty) of organizations of higher and (or) postgraduate education No. 591 dated 11/20/2023         </p>	Competencies (soft skills, digital skills)		
	Attributes of a graduate	knowledge	Skills
	<ul style="list-style-type: none"> <li>- High professionalism in the field of IT technology and business;</li> <li>- Emotional intelligence;</li> <li>- Adaptability to global challenges;</li> <li>- Leadership;</li> <li>- Entrepreneurial thinking;</li> <li>- Global citizenship;</li> <li>- Understanding the importance of principles and culture of academic integrity;</li> <li>- Communication competencies;</li> <li>- Learning skills necessary for independent continuation of further education.</li> </ul>	<ul style="list-style-type: none"> <li>- He has a culture of thinking, is capable of generalization, analysis, perception of information, setting goals and choosing ways to achieve it.</li> <li>- He applies the theories and methods of sociology, political science, cultural studies and psychology to develop critical thinking and its application in the socio-political sphere.</li> <li>- He has a well-developed oral and written speech, manages information processes and uses various strategies for working with information.</li> <li>- Demonstrates the ability to express his thoughts on professional topics in business English and a second foreign language.</li> <li>- Shows an understanding of the basics of micro- and macroeconomics, applies them in practice.</li> <li>- Organizes effective team interaction using design thinking to solve problems in conditions of uncertainty.</li> </ul>	<ul style="list-style-type: none"> <li>- Uses specialized programs to analyze statistical information.</li> <li>- Develops effective algorithms for processing various types of data and their implementation in programming languages, including descriptions of algorithms and data structures.</li> <li>- He has skills in creating texts for digital channels, interface design, setting up advertising and generating traffic to websites and social networks.</li> <li>- Applies the methodology and techniques of conducting international IT business in the context of the digital transformation of the economy.</li> <li>- Has the ability to analyze complex problems and find solutions, apply algorithmic thinking to optimize processes, as well as the ability to work with large amounts of data and extract valuable information from them.</li> </ul>
	Professional skills (hard skills)		
<ul style="list-style-type: none"> <li>- Defines the essence and content of the processes of management, management, entrepreneurship and management.</li> <li>- 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,</li> </ul>			

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	<p>and stress.</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Calculates and prepares a business plan and project analysis of an investment and business project.</li> <li>- Applies regulations for managing the processes of the IT infrastructure lifecycle and the activities of IT enterprises.</li> </ul>
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Барлығы модуль бойынша / Итого по модулю / Total for module		Модуль системасы, методологиясы және стандарттары / Модуль системасы, методологиясы және стандарттары / Module Enterprise management systems, methodologies and standards										По выбору обучающегося / By student's option	
2	Интернет-коммуникацияларды басқару Управление интернет-коммуникациями Internet Communications management	БД (КВ) BD (EC)	UIC 5201-25 UIC 5201-25 UIC 5201-25	1	5	150	45	30	15	15	90	2 + 1 + 0	По выбору обучающегося / By student's option
3	Үлкен деректерді өңдеу және талдау Обработка и анализ больших данных Big Data processing and analysis	БП (ТК) БД (КВ) BD (EC)	OABD 5203-25 OABD 5203-25 OABD 5203-25	2	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша / По выбору обучающегося / By student's option
4	DataScience DataScience		DS 5203-25 DS 5203-25										
5	Қолданбалы ақпарат теориясы Прикладная теория информации Applied Information Theory	БП (ТК) БД (КВ) BD (EC)	PTI 5202-25 PTI 5202-25 PTI 5202-25	2	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша / По выбору обучающегося / By student's option
6	Бағдарламалық инженерия Программная инженерия Software Engineering		PI 5202-25 PI 5202-25										
				15		450	135	90	45	45	270		

Барлығы модуль бойынша / Итого по модулю / Total for module		Модуль системасы, методологиясы және стандарттары / Модуль системасы, методологиясы және стандарттары / Module Enterprise management systems, methodologies and standards										По выбору обучающегося / By student's option	
1	IT – менеджмент IT – менеджмент IT – management		ITM 6301-25 ITM 6301-25 ITM 6301-25										Білім алушының таңдауы бойынша / По выбору обучающегося / By student's option
2	Кәсіпорын ресурстарын жоспарлау жүйелері Системы планирования ресурсов предприятия Enterprise resource planning systems	БөП (ТК) ПД (КВ) PD (EC)	SPRP 6301-25 SPRP 6301-25 SPRP 6301-25	1	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша / По выбору обучающегося / By student's option
3	Тимді басқару модельдері Модели эффективного менеджмента Effective management models	БөП (ТК) ПД (КВ) PD (EC)	MEM 6302-25 MEM 6302-25 MEM 6302-25	2	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша / По выбору обучающегося / By student's option
4	АТ консалтинг IT-консалтинг IT consulting		ITK 6302-25 ITK 6302-25 ITK 6302-25										
5	Нейрондық желілердің модельдері мен әдістері Модели и методы нейронных сетей Models and methods of neural networks	БөП (ТК) ПД (КВ) PD (EC)	MMNS 6303-25 MMNS 6303-25 MMNS 6303-25	3	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша / По выбору обучающегося / By student's option
6	Шешім қабылдауды қолдау модельдері мен әдістері Модели и методы поддержки принятия решений Models and methods of decision support		MMPPR 6303-25 MMPPR 6303-25 MMPPR 6303-25										
7	Блокчейн технологиясының теориясы Теория технологии блокчейн Theory of blockchain technology	БөП (ТК)	TTB 6304-25 TTB 6304-25 TTB 6304-25										Білім алушының таңдауы бойынша / По выбору обучающегося / By student's option

№	IT менеджменттің дамуы әдістері мен стандарттары Modern Methodologies and Standards IT Management	ІД (КВ) PD (EC)	3	5	150	45	30	15	15	90	2 + 1 + 0	По выбору обучающегося/ By student's option
8	Ақпараттық жүйелер деректерін басқару Управление данными информационных систем Data management of information systems	ББП (ТК) ПД (КВ) PD (EC)	3	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша/ По выбору обучающегося/ By student's option
9	Ақпараттық жүйелердің қауіпсіздігін басқару Управление безопасностью информационных систем Information systems security management	ББП (ТК) ПД (КВ) PD (EC)	3	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша/ По выбору обучающегося/ By student's option
10	Ақпараттық технологияларды стратегиялық басқару Стратегическое управление информационными технологиями Strategic management of information technologies	ББП (ТК) ПД (КВ) PD (EC)	3	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша/ По выбору обучающегося/ By student's option
11	Терең машиналық оқыту және жасанды интеллект Глубокое машинное обучение и искусственный интеллект Deep Machine Learning and Artificial Intelligence	ББП (ТК) ПД (КВ) PD (EC)	3	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша/ По выбору обучающегося/ By student's option
12					900	270	180	90	90	540		
<b>Барлығы модуль бойынша / Итого по модулю / Total for module</b>			<b>30</b>									

Модуль / Module № 4		Міндетті пәндер модулі / Модуль обязательных дисциплин / Module of compulsory disciplines										
1	IT жобаларын және өзгерістерді басқару Управление IT-проектами и изменениями/ IT project and Change management	ББП (ЖК) ПД (БК) PD (UC)	2	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша/ По выбору обучающегося/ By student's option
2	АЖ талдау, модельдеу және жобалау Анализ, моделирование и проектирование ИС Analysis, design and planning of IS	ББП (ЖК) ПД (БК) PD (UC)	3	5	150	45	30	15	15	90	2 + 1 + 0	Білім алушының таңдауы бойынша/ По выбору обучающегося/ By student's option
3	Зерттеу практикасы Исследовательская практика Research practicum	ББП (ЖК) ПД (БК) PD (UC)	4	13	390	0						Білім алушының таңдауы бойынша/ По выбору обучающегося/ By student's option
<b>Барлығы модуль бойынша / Итого по модулю / Total for module</b>			<b>23</b>		<b>690</b>	<b>90</b>	<b>60</b>	<b>30</b>	<b>30</b>	<b>180</b>		13 апта / неделя / weeks

Зерттеу қызметі / Исследовательская деятельность / Research activities



## ЭКСПЕРТНОЕ ЗАКЛЮЧЕНИЕ

### на образовательную программу 7M06137 -«IT - менеджмент» научно-педагогического направления АО «Казахский университет технологии и бизнеса»

Образовательная программа (далее ОП) 7M06137 -«IT - менеджмент» научно-педагогического направления, реализуемая в АО «Казахский университет технологии и бизнеса» представляет собой систему учебно-методических документов, регламентирующих цели, ожидаемые результаты, содержание, условия и технологии реализации образовательного процесса, систему оценки качества подготовки выпускника и соответствует нормативно-правовым актам МНВО РК.

ОП разработана и утверждена на основании требований Государственных общеобязательных стандартов высшего и послевузовского образования (Приказ МНВО РК от 20.07. 2022 г. № 2 (с изменениями и дополнениями на 20.02. 2023 года), а также на основе отраслевых рамок квалификации.

Целью образовательной программы 7M06137 -«IT - менеджмент» является подготовка высококвалифицированных руководителей ИТ-служб предприятий и государственных учреждений, ведущих консультантов и руководителей ИТ-проектов компаний, способных развивать архитектуру и ИТ-инфраструктуру предприятий малого и среднего бизнеса, обладающих высокой культурой, достаточным уровнем знаний и практического опыта в области ИТ-менеджмента, а также формирование профессиональных навыков и компетенций, соответствующих преподавательской деятельности в ВУЗах, профильных колледжах по направлению «IT – менеджмент», необходимых для профессиональной, научной и образовательной деятельности во благо общества.

Обязательная часть профессиональной образовательной программы направлена на формирование управленческих, коммуникативных компетенций, состоящих из умения планировать и организовывать работу коллектива, используя современный менеджмент и принципы делового общения; анализа и контроля производственной деятельности подразделения. Вариативная часть образовательной программы дает возможность расширения и углубления подготовки и получения дополнительных компетенций, умений и знаний, необходимых для обеспечения конкурентоспособности выпускника в соответствии с требованиями рынка труда.

Реализация образовательной программы обеспечивается квалифицированными педагогическими кадрами, занимающимися научной и научно-методической деятельностью. К преподаванию дисциплин профессионального цикла привлечены преподаватели, которых имеют ученые степени и ученые звания.

Модули образовательной программы 7M06137 -«IT - менеджмент» обеспечивают теоретическую и практическую подготовку в области IT – менеджмента, Анализ данных и управление информационными технологиями, Модуль системы, методологии и стандарты управления предприятиями.

Практические навыки обеспечивают дисциплины: Управление безопасностью информационных систем, Управление данными информационных систем.

В рамках актуализации образовательной программы 7M06137 -«IT - менеджмент» были добавлены и усилены ключевые дисциплины, отражающие современные тренды в цифровой трансформации бизнеса и управлении технологиями. Среди них:

- Глубокое машинное обучение и искусственный интеллект  
Изучение методов глубокого обучения и искусственного интеллекта направлено на формирование компетенций в области анализа больших данных, разработки интеллектуальных систем и внедрения ИИ-решений в бизнес-процессы. Эта

дисциплина позволит студентам не только понимать техническую сторону ИИ, но и эффективно использовать его в управленческих решениях.

- **Теория технологии блокчейн.** В связи с растущей значимостью децентрализованных технологий и их применением в таких сферах, как финансы, логистика, кибербезопасность и документооборот, данная дисциплина дает фундаментальные знания о принципах работы блокчейна, смарт-контрактах, архитектуре распределённых систем и перспективных кейсах применения.
- **Стратегическое управление информационными технологиями**  
Дисциплина направлена на развитие навыков стратегического планирования, оценки эффективности ИТ-инфраструктуры, выстраивания ИТ-архитектуры и управления цифровыми проектами в организации. Особое внимание уделяется роли ИТ в достижении бизнес-целей и конкурентных преимуществ.

Все модули дисциплины обеспечивает освоение современных методов управления и анализа ИТ - процессов.

Модель компетенций магистра ОП 7М06137 -«ИТ - менеджмент» складывается из двух укрупненных наборов компетенций:

1. Универсальные: общепрофессиональные и социально-личностные, общекультурные;
2. Профессиональные: аналитические, проектные, производственно-технологические, организационно-управленческие, научно-исследовательские.

Профессиональные компетенции соответствуют областям и задачам профессиональной деятельности и включают:

1. Способность к формированию стратегии использования ИКТ в различных предметных областях и прогнозированию вероятных тенденций развития этих стратегий.

2. Знание и понимание специфики предметной области и объектов ИТ-менеджмента, особенностей бизнес-задач и видов деятельности заказчика, принципов реинжиниринга по оптимизации бизнес-процессов.

3. Способность проектировать информационные процессы и системы с использованием инновационных инструментальных средств.

4. Владение современными информационными технологиями управленческих решений и обладает способностями руководителя: планировать, управлять и контролировать выполнение требований, выполнять оценки степени трудности, рисков, бюджета, и времени в течение выполнения проекта, осуществлять контроль рабочего графика, осуществлять сопровождение информационной системы на всех этапах ее жизненного цикла.

5. Способность использовать и развивать методы научных исследований в области новых технологий проектирования и разработки информационных систем в прикладных областях.


На основании приведенной экспертизы можно сделать следующие выводы:

- представленная к рассмотрению программа отвечает требованиям ГОСО РК;
- структурные элементы программы реализуются с учетом компетентностного подхода;
- дисциплины учебного плана логически отражают содержание профиля подготовки 7М06137 -«ИТ - менеджмент» с учетом междисциплинарных связей;
- Учебно-методическое обеспечение представлено рабочими программами дисциплин, аннотациями рабочих программ дисциплин, фондами оценочных средств дисциплин, разработанными программами практик и итоговой государственной аттестации;
- характеристика среды вуза и факультета позволяют обеспечить развитие общекультурных компетенций выпускника.

**Предложения по совершенствованию образовательной программы:** учитывая постоянную динамику изменения методов и средств информационно-коммуникационных технологий, рекомендуется обновлять элективные дисциплины на 10% в соответствии с компетенциями выпускника по ОП 7М06137 -«IT - менеджмент» и требованиями рыночной экономики и спросом работодателей.

**Выводы:**

- Образовательная программа рекомендуется к использованию в учебном процессе;
- Структура и содержание образовательной программы 7М06137 -«IT - менеджмент» имеет направленность на удовлетворение потребностям рынка труда и работодателей, соответствует аналогичным программам бакалавриата Европейского образовательного пространства и позволяет достичь ожидаемых результатов обучения.

Генеральный директор ТОО «AlfaSystems»  Айтуев А.С.

Дата: 23.05.2024г

