MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE REPUBLIC OF KAZAKHSTAN

KAZAKH-AMERICAN FREE UNIVERSITY

«APPROVED»
Decision of Academic Council of KAFU,
Minute № 9 by «13» May 2025
Y. Mambetkaziyev

MODULAR EDUCATIONAL PROGRAM

Educational program 7M04105 «Management and Information Technology»

Level Master's Degree (scientific and pedagogical direction)

Code and classification of education sphere:_7M04 Business, management and law

Code and classification of training directions: 7M041 Business and management

Group of educational programs: M072 Management and administration

Level in ISCE: 7

Level in NFC: 7

Level in ICF: 7

Duration of training: 2

Number of credits: 120

Ust-Kamenogorsk, 2025

НАО РК Правительство для граждан

(Наименование предприятия, учреждения, организации)

(Ф.И.О. руководителя

ТОО "IC-Рейтинг"

(Наименование предприятия, учреждения, организации)

(Ф.И.О. руководителя

(Наименование предприятия, учреждения, организации)

(Ф.И.О. руководителя)

Passport of educational program

Year of design	2025
Design background	- Law of the Republic of Kazakhstan "On Education" dated July 27, 2007 No. 319-III ZRK (as amended and supplemented as of March 15, 2025). - Standard Rules for the Activities of Educational Organizations Implementing Educational Programs of Higher and Postgraduate Education, approved by Order of the Ministry of Education and Science of the Republic of Kazakhstan No. 595 dated October 30, 2018 (as amended and supplemented as of August 2, 2023 No. 379). - State Compulsory Standard of Higher and Postgraduate Education, approved by Order of the Minister of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022 No. 2 (registered with the Ministry of Justice of the Republic of Kazakhstan on July 27, 2022 No. 28916), as amended and supplemented as of March 4, 2025 No. 90. - Rules for Organizing the Educational Process According to the Credit Technology of Education, approved by Order of the Minister of Education and Science of the Republic of Kazakhstan dated April 20, 2011 No. 152 (as amended by Orders of the Minister of Science and Higher Education of the Republic of Kazakhstan dated April 4, 2023 No. 145 and July 25, 2023 No. 334). - Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 13, 2018 No. 569 "On Approval of the Classifier of Areas of Training for Personnel with Higher and Postgraduate Education" (as amended by Order of the Acting Minister of Science and Higher Education of the Republic of Kazakhstan dated July 21, 2023 No. 327). - On Approval of the Methodology for the Formation of Statistical Indicators on Education According to the "International Standard Classification of Education-2011" Scheme, approved by Order of the Acting Chairman of the Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan dated December 23, 2015 No. 220 (registered with the Ministry of Justice of the Republic of Kazakhstan on January 21, 2016 No. 12908), as amended by the Order of the Acting Head of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan dated January 10, 2022 No. 51. - Academic Policy of KAFU, approved by the Academic Council, Minute No. 5 dated January 15, 2024. - Regulations on the Development and Approval of Educational Programs, approved by the Academic Council of KAFU, Minute No. 3 dated November 17, 2021.
Professional Standard	"Small (medium) enterprise management". Appendix No. 95 to the order of the Deputy Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" dated 26.12.2019 No. 263;
Occupations	Manager of a small (medium) enterprise Deputy manager of a small (medium) enterprise (general profile) **Other possible job titles:** 1210-0-054 Factory Director 1210-0-057 Center Director

	1210-0-063 Head of Center 1210-0-068 Regional Director
Work Skills	**Mandatory job functions:** 1) Definition of policies and procedures for making and implementing management decisions **Skills:** - Formulate a list of tactical and strategic goals and objectives. - Define performance indicators and strategic indicators of the company's activities. - Select and combine the most effective mechanisms to achieve set goals and objectives. - Determine the type of market behavior of the company in accordance with market conditions. - Ensure effective distribution of powers and responsibilities between the company's departments. - Ensure effective interaction between the company's departments. - Effectively utilize the knowledge and skills of the company's personnel to achieve set tactical and strategic goals and objectives. - Evaluate the efficiency of the company's resource usage. - Timely adjust the process of using the company's resources. - Control and ensure reliable parameters of capital adequacy, liquidity, and creditworthiness of the company. 2) Legal support of the company's activities **Skills:** - Use legal tools for company management and ensure its operation in market conditions. - Monitor contractual and financial discipline. - Regulate social and labor relations. - Ensure the investment attractiveness of the company to maintain and expand business operations. - Protect and represent the property and other interests of the company in court and arbitration. - Protect and represent the property and other interests of the company in government bodies and other organizations. - Conclude contracts, conduct transactions, operations with external organizations or other legal entities. - Issue orders. - Represent the company at business meetings. - Ensure the company fulfills its obligations to the state budget and extra-budgetary funds. - Ensure the company fulfills its obligations to counterparties. - Monitor the execution of economic and labor contracts. - Ensure compliance with the company's current accounting and depreciation policies. 3) Ensuring the efficiency of the company's operations **Skills:** - Ensure product quality compliance with existing quality standards. - Introduce new types of equipment and technologies, advanced management and labor organization methods into the company's operations. - Develop (if absent) product quality standards and procedures. - Provide effective material incentives for employees. - Provide effective non-material incentives for employees. - Fairly discipline employees who do not perform their job

	functions at the required level. - Develop and defend business plans. - Formulate and adhere to the company's budget in accordance with the development strategy. - Ensure the implementation of business plans and the company's budget. - Develop and monitor the implementation of the company's environmental policy. - Comply with the environmental legislation of the Republic of Kazakhstan. 4) Implementation of effective personnel policy **Skills:** - Develop, conclude, and implement a collective agreement. - Monitor compliance with labor and production discipline. - Organize effective hiring and dismissal procedures for employees. - Form a personnel reserve of the company. - Formulate requirements for potential members of the company's team.
Professional Standard	"Business analytics and IT project management". Appendix No. 5 to the order of the Deputy Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" dated 5 December 2018 No. 330;
Occupations	Programmer-Analyst
Work Skills	**Mandatory job functions:** 1) Development of procedures for integrating software modules **Skills:** - Create program code for procedures integrating software modules - Document program code with technical documentation - Use the selected programming environment for development - Manage the programming environment and analysis tools - Apply methods and tools for assembling modules and software components - Develop procedures for software deployment, data migration and transformation, creation of software interfaces - Develop procedures for data migration and transformation software - Identify and manipulate data 2) Analysis of software requirements **Skills:** - Analyze the implementation of requirements - Summarize the analysis performed - Develop options for requirement implementation - Evaluate and justify recommended solutions - Communicate with stakeholders - Summarize meetings with the client - Identify key issues for problem-solving 3) Development of technical specifications for software components and their interaction **Skills:** - Select tools for implementing software requirements - Manage the process of coordinating technical specifications - Develop options for software implementation - Allocate tasks within the team - Evaluate and justify recommended solutions

	- Communicate with stakeholders - Prepare a report on the completed work assignment - Identify key issues related to completed work - Determine ways to solve problems 4) Software design **Skills:** - Study the provided algorithm of the work assignment - Use existing standard solutions and software design patterns - Analyze and implement data structures - Apply methods and tools for designing data structures - Understand types of data structures - Apply methods and tools for database design - Use CASE tools - Create a DBMS-oriented schema - Apply methods and tools for designing software interfaces - Use modern computer technologies to obtain information - Use global computer networks as a means of obtaining and transmitting information
Professional Standard	"Professional standard: for teachers (faculty) of higher and (or) postgraduate education organizations" dated 20 November 2023 No. 591;
Occupations	2311-0 – Lecturer, Senior Lecturer in the field of education, Higher and/or Postgraduate Education Institutions (HPE)
Work Skills	**Mandatory job functions:** 1. Teaching **Skills:** - Ensuring the required level of academic competencies of students; - Ensuring the required level of professional competencies of students. 2. Conducting scientific research **Skills:** - Ensuring integration of science, higher education, and the labor market; - Developing the required level of research skills in students. 3. Implementation of scientific and methodological work **Skills:** - Scientific and methodological support of macro-processes in higher and postgraduate education institutions (HPE). 4. Socialization of the student youth **Skills:** - Promoting social values in the student environment; - Involving students in the values of the chosen profession. **Additional job functions:** 5. Interaction with stakeholders in higher and postgraduate education **Skills:** - Interaction with internal stakeholders; - Interaction with external stakeholders.
Frequency of review	Once a year
Implementation period	2 years
Mission	The mission is to form highly qualified and responsible specialists in the field of IT management, with deep knowledge in the field of information technology, leadership qualities and the ability for scientific and pedagogical activities, providing comprehensive education focused on modern labor market requirements, as well as

	actively introducing innovations in the field information technology management.
Goal	The educational program 7M04105 “Management and Information Technology” (scientific and pedagogical direction) has the following goal: formation of highly qualified specialists in the field of IT management with deep knowledge and practical skills sufficient for active scientific and educational activities aimed at social development.
Objectives	The main objectives of the master's training program 7M04105 “Management and Information Technology” are: – Training of highly qualified specialists in the field of information technology management. – Development of skills in solving complex problems in the field of IT management. – Formation of understanding of strategic and operational management in the IT sector. – Mastering the tools and methods of project management in the IT field. – Acquiring knowledge about the principles and methods of quality management in IT projects. – Development of market analysis skills for IT services and products. – Preparation for working with a team of IT specialists and managing projects in an international environment. – Development of skills in strategic planning and management decision-making in the IT field. – Improving communication and leadership skills in IT companies. – Mastering by undergraduates fundamental courses at the intersection of sciences, guaranteeing them professional mobility; – Acquisition of research skills by masters, participation in research activities at various levels, continuation of scientific training in doctoral studies; – Obtaining by graduates the necessary minimum knowledge in the field of university pedagogy and psychology and teaching experience at a university.
List of qualifications and positions	Graduates of EP 7M04105 “Management and Information Technology” can occupy the following positions: 1. IT Project Manager: Graduates of this program have not only technical knowledge, but also project management skills in the IT sector. They can effectively plan, control and present projects, allocate resources and manage teams. 2. IT consultant: graduates of the training program are able to provide expert advice on implementing the latest IT technologies, optimizing business processes and increasing the efficiency of enterprises. They can analyze customer needs, develop solutions, and work closely with business customers. 3. Information security manager: graduates of the program have knowledge in the field of information security, as well as the ability to analyze and eliminate risks associated with storing and processing data. Such graduates are able to develop security policies and procedures, ensure the protection of information systems and solve problems associated with cyber attacks.

	4. Head of IT department: graduates of this program have the skills to plan, coordinate and control the work of the IT department in an organization. They are able to participate in the development of IT strategy, determine the budget, manage personnel and ensure the effective operation of IT systems. 5. Business analyst in IT: graduates of the program are able to analyze business processes, identify potential for the implementation of IT systems and applications, and optimize processes using new technologies. They can collect and analyze enterprise requirements, develop technical specifications and participate in the development of new IT solutions. 6. And also hold positions of employee, senior, leading or chief researcher of research organizations; expert, consultant to educational and methodological organizations; teacher, senior teacher of secondary vocational or higher educational institutions in the field of training.
Conditions for the implementation of the educational program (EP) for persons with disabilities and special educational needs (SEN)	Ensuring unimpeded access to buildings: - Entrance areas of academic buildings are equipped with ramps; - Special assistance call buttons are installed; - Tactile signs are placed on doors and stair landings; - Access roads and parking spaces are available. On the first floors of academic buildings, there are designated public restrooms equipped with handrails, holders, and tactile indicators. Organization of the educational process for students: - Magnifying glasses, screen magnification software for the visually impaired, and screen reader programs for the blind are available; - The electronic library includes audiobooks. At the university, the following services are provided: - An inclusion office operates with a full-time inclusion support assistant (teaching staff); - A psychological support service is available, provided by the university psychologist.
Graduate competencies developed as a result of mastering the educational program 7M04105 "Management and Information Technology"	
General competences (GC)	*Upon completion of the educational program, master's students must possess the following general competencies, which ensure the socio-cultural development of the personality of the future specialist based on the formation of his ideological, civic and moral positions:* GC 1: have the ability to independently acquire, comprehend, structure and use new knowledge and skills in professional activities, develop their innovative abilities; GC 2: independently formulate research goals, establish a sequence for solving professional problems; GC 3: apply in practice knowledge of fundamental and applied sections of the disciplines that determine the focus (profile) of the master's program; GC 4: professionally select and creatively use modern scientific and technical equipment to solve scientific and practical problems; GC 5: critically analyze, present, defend, discuss and disseminate the results of their professional activities; GC 6: possess the skills of drafting and preparing scientific and technical documentation, scientific reports, reviews, reports and articles; GC 7: readiness to lead a team in the field of their professional

	activities, tolerantly perceiving social, ethnic, religious and cultural differences; GC 8: be ready to communicate orally and in writing in a foreign language to solve professional problems; GC 9: be able to create teams of professionals and work effectively in teams, defend one's position, persuade, find compromise and alternative solutions; GC 10: have an idea of the professional competence of a higher education teacher, the contradictions and consequences of globalization; GC 11: – be able to apply knowledge of pedagogy and psychology of higher education in their teaching activities; GC 12: to be competent in the field of scientific research methodology, scientific and pedagogical activities, in conducting research in the professional field and expanding professional skills.
Key competences (KC)	A graduate of the master's program EP 7M04105 "Management and Information Technology" must: **have an idea:** KC 1: on the role of science and education in public life; KC 2: about modern trends in the development of scientific knowledge; KC 3: about current methodological and philosophical problems of natural (social, humanitarian, economic) sciences; KC 4: on the professional competence of a higher school teacher; KC 5: about the contradictions and socio-economic consequences of globalization processes; **know:** KC 6: methodology of scientific knowledge; KC 7: principles and structure of scientific activity organization; KC 8: psychology of cognitive activity of students in the learning process; KC 9: psychological methods and means of increasing the effectiveness and quality of training; **be able to:** KC 10: use acquired knowledge for the original development and application of ideas in the context of scientific research; KC 11: critically analyze existing concepts, theories and approaches to the analysis of processes and phenomena; KC 12: integrate knowledge obtained within different disciplines to solve research problems in new unfamiliar conditions; KC 13: By integrating knowledge, make judgments and decisions based on incomplete or limited information; KC 14: apply knowledge of pedagogy and psychology of higher education in their teaching activities; KC 15: apply interactive teaching methods; KC 16: carry out information-analytical and information-bibliographic work using modern information technologies; KC 17: think creatively and take a creative approach to solving new problems and situations; KC 18: be fluent in a foreign language at a professional level, allowing you to conduct scientific research and teach special disciplines in universities; KC 19: summarize the results of research and analytical work in the form of a dissertation, scientific article, report, analytical note, etc.;

	have the skills: KC 20: research activities, solving standard scientific problems; KC 21: implementation of educational and pedagogical activities on credit technology of education; KC 22: methods of teaching professional disciplines; KC 23: use of modern information technologies in the educational process; KC 24: professional communication and intercultural communication; KC 25: art, correct and logical presentation of one's thoughts in oral and written form; KC 26: expanding and deepening the knowledge necessary for everyday professional activities and continuing education in doctoral studies. **be competent:** KC 27: in the field of research methodology; KC 28: in the field of scientific and scientific-pedagogical activities in higher educational institutions; KC 29: in matters of modern educational technologies; KC 30: in carrying out scientific projects and research in the professional field; KC 31: in ways to ensure constant updating of knowledge, expansion of professional skills and abilities.
Special competences (SC)	*Upon completion of the educational program, master's students must possess the following special competencies, which form the ability of a specialist to use scientific and practical knowledge in the field of professional activity, constantly improving their scientific and professional training, demonstrating the ability to independently set and solve new professional tasks, and demonstrate a high degree of professional adaptation:* *in the field of organizational and management activities:* SC 1: develop and implement sections of the innovation strategy, promptly manage throughout the project life cycle; SC 2: process significant results of the project life cycle; SC 3: determine policies and procedures for making and executing management decisions; SC 4: monitor contractual and financial discipline and regulate social and labor relations in the assigned departments of the company; SC 5: ensure the efficiency of the company; SC 6: implement an effective personnel policy; SC 7: carry out work to manage the quality of product operation and the process of production of products and/or services, design of products and/or services; SC 8: develop and implement a quality system for product (service) management; SC 9: assist in the development of the organization's business strategy; SC 10: formulate HR strategies/policies of the organization as an integral part of strategic management; SC 11: develop and improve HR infrastructure (methods, technologies, tools) to implement strategic business goals; SC 12: regularly evaluate and improve the effectiveness of HR strategy/policy in accordance with the strategic goals of the organization; SC 13: manage HR processes with a focus on the highest priority tasks at a specific stage of business development;

	SC 14: manage HR risks; SC 15: take part in the development and implementation of human resource management strategy/policy, HR processes, technologies and tools; SC 16: build relationships with business management, HR Expertise Center, HR Service Center; *in the field of analytical activities:* SC 17: ability to use quantitative and qualitative methods to conduct applied research and manage business processes, prepare analytical materials based on the results of their application; SC 18: master methods of economic and strategic analysis of the behavior of economic agents and markets in the global environment in conditions of financial security and competitiveness; SC 19: the ability to use modern methods of corporate finance management to solve strategic problems; in the field of research activities: SC 20: the ability to generalize and critically evaluate the results of research on current management problems obtained by domestic and foreign researchers; SC 21: the ability to present the results of the research in the form of a scientific report, article or report; SC 22: the ability to justify the relevance, theoretical and practical significance of the chosen topic of scientific research; SC 23: ability to conduct independent research in accordance with the developed program; *in the field of pedagogical activity:* SC 24: have the ability to develop curricula and methodological support for management disciplines, apply modern teaching methods and techniques; ensure the required level of academic competencies of students, taking into account the principles of student-centered learning, digital technologies and innovations; integrate science, higher education and the labor market, developing students' research skills; carry out scientific and methodological work and promote social values using modern teaching technologies, introducing students to professional values; and interact with stakeholders of higher and postgraduate education. *in the field of computer and digital technologies:* SC 25: develop machine learning algorithms, analyzing and processing large volumes of data; SC 26: optimize machine learning models, identify and process anomalous data; SC 27: design and develop computer networks SC 28: manage and monitor computer systems, optimizing the performance of computer systems; SC 29: develop methods of security and data protection in networks and design and configure network infrastructure SC 30: apply object-oriented programming, developing multi-threaded and asynchronous applications SC 31: develop the architecture and design of computer systems, design and build effective databases SC 32: implement 2D and 3D computer graphics algorithms, design and create visualizations and animations SC 33: apply computer graphics methods in various industries (gaming industry, architecture, medicine, etc.);

	SC 34: Know the fundamentals of wireless communications, standards and minutes, equipment specifications, network architecture, security systems, integration with other vehicle components and applications in industry and research; SC 35: analyze digital business models, identify their key components and main elements; SC 36: Optimize digital business models, identify opportunities to improve efficiency and process efficiency, and predict the development of digital business models based on current trends and changes in the industry; SC 37: integrate digital technologies into business models, ensuring their compatibility and interaction, as well as develop and implement new digital strategies and business models in accordance with market requirements; SC 38: adapt digital business models to changing modern conditions and customer needs.
Degree awarded	Master of economic sciences
Learning outcomes of the EP 7M04105 « Management and Information Technology »	**LO 1.** Understand the evolution of scientific thinking, recognizing the importance of effective exchange of information and ideas within the scientific community, developing skills in planning, organizing and executing scientific research, and effectively managing change and adapting to new demands of the research environment. **LO 2.** Possess pedagogical skills, applying psychological aspects of management, taking into account the characteristics of students and the requirements of modern education, be able to communicate effectively in a professional foreign language. **LO 3.** Demonstrate practical skills in applying machine learning to data analysis, developing and optimizing computing systems and telecommunications networks, using various programming paradigms to develop efficient and flexible software solutions, designing and deploying Car-to-Car Communication systems. **LO 4:** Develop skills in advanced computer graphics, implementation of software systems, and participation in computer projects, allowing students to master the development of complex graphics solutions, carry out computer science projects, and design and implement software systems. **LO 5.** Determine the policies and procedures for management decisions, provide legal support for the company's activities, and implement an effective personnel policy to ensure the efficiency of the enterprise's activities. **LO 6.** Have deep knowledge and skills in the field of digital business models, digital business process modeling and information systems architecture, which will allow you to develop innovative digital strategies and effectively manage information resources in a modern organization. **LO 7.** Know modern methods and theories in the field of management, strategic marketing, risk management, and also master solutions to management challenges in a globalized economy. **LO 8:** Manage international resources, including attracting, developing and retaining talent in a global work environment, mastering techniques and strategies for successfully managing cross-cultural collaboration, recognizing differences in values, communication and behavior between different cultures. **LO 9:** Demonstrate skills in analyzing the competitiveness of an

	enterprise and determining the tactical and strategic direction of development of a division and/or enterprise, taking into account changes in the market and business environment trends. **LO 10**: Plan, develop and coordinate the processes of integrating software modules, analyze software requirements, create technical specifications, design software, and also consult on the creation of business strategies for the system **LO 11:** Conduct training and scientific research, carry out scientific and methodological work, promote the socialization of young people and interact with stakeholders of higher and postgraduate education
Forms of summarizing implementation results	Writing and defense of master's thesis

2. Content of Educational Program

The Name of the Module	Learning Outcomes	Volume ECTS	Semester	Module Components: Code of Discipline	Module Components: Name of Discipline / internships, etc.	Module Components: Discipline Cycle (CD, FD, CD)	Module Components: CC/UC/EC	Number of Credits	Forms of Control	Formed Competences
Research	**- demonstrate developing knowledge and understanding in the field under study, based on advanced knowledge of this field, when developing and (or) applying ideas in the context of the study:** - know and understand the history of philosophy, the main stages and cause-and-effect relationships of the development of philosophy; modern trends in the development of philosophy; fundamentals of organizing scientific research, methods and means of obtaining, storing and systematizing scientific and technical information, methods of statistical processing of the results of direct and indirect measurements, forms of presentation of scientific and technical information; existing economic and mathematical methods and models used in economics; documents for regulatory support of research activities at the university; State Stadards requirements for bibliographic description of scientific sources, legislative acts, other regulatory materials and official documents; structures of the educational process in a higher educational institution. Know the sources of information for analysis and calculations, as well as the methods and technology of analysis and calculations for research practice, the basic concepts and essence of research and design and implementation activities; Analyze the reasons for and need for change in an organization, evaluate its potential impact, develop strategies for implementing change, and effectively manage the change process to achieve its goals. **- apply your knowledge, understanding and abilities at a professional level to solve problems in a new environment, in a broader interdisciplinary context:** establish cause-and-effect relationships in the development of philosophy; apply the basic laws of philosophy in professional activities; draw up experimental plans, search for information using information systems, correctly process and present research results; apply modern methods for constructing and analyzing economic and mathematical models, taking into account the specifics of economic processes; design and carry out their professional, scientific and scientific-pedagogical activities, as well as the activities of the team; set and solve research goals and objectives, complex interdisciplinary research problems; predict the results of your professional and scientific activities; control and objectively evaluate their results, take responsibility for professional and scientific decisions; conduct joint scientific activities; solve	**54**	2	IFN 5201	History and Philosophy of Science	FD	UC	4	Exam	GC 1 GC 2 GC 3 GC 4 GC 5 GC 7 GC 9 GC 12 KC 1 KC 2 KC 3 KC 5 KC 6 KC 7 KC 10 KC 11 KC 12 KC 13 KC 16 KC 17 KC 19 KC 20 KC 25 KC 27 KC 30 KC 31 SC 20 SC 21 SC 22 SC 23
			1	NK 5305	Scientific Communications	CD	EC	5	Exam	
			1	UI 5313	Management of Change	CD	EC	5	Exam	
			3	OPNI 6320	Research Planning and Organization	CD	EC	5	Exam	
			1,2,3, 4		Master's student's research work, including internship and master's thesis			24	Report defense	
			4	IP 5302 IP 6303	Research Internship			8	Report defense	
			4		Writing and defense of master’s thesis			8		

	problems in new unfamiliar conditions in an interdisciplinary context; integrate knowledge, cope with difficulties; use the Internet system; plan your further professional development, constantly improve your educational level; resist personal and professional deformations; master methods of self-realization, self-organization and self-rehabilitation; draw up a plan for research work; collect, process, analyze and systematize scientific information on a topic (task) for writing scientific articles or preparing an analytical review; use appropriate scientific research methods to write a master's thesis; carry out independent scientific and practical research in accordance with certain practice objectives. Forms a database of analysis and economic calculations, analyzes the data obtained, builds graphs, forms tables, and based on the data obtained makes conclusions and proposals based on the results of research practice. **- collect and interpret information to form judgments, taking into account social, ethical and scientific considerations:** form judgments on relevant professional and scientific problems; about the significance and consequences of their professional activities. **- clearly and unambiguously communicate information, ideas, conclusions, problems and solutions to both specialists and non-specialists:** establish contact, maintain a conversation, have synchronous communication skills, be able to negotiate and insist on their legal rights; respond quickly in a non-standard, problematic situation of professional communication. **- learning skills necessary for independent continuation of further education in the field of study:** have the skills of independent and creative use of theoretical knowledge in the process of subsequent training in accordance with the curriculum for training specialists; management of subject and personal orientation, personal self-improvement; application of mathematical methods in solving economic problems; scientific research; a creative, research approach to professional activity, acquiring skills in analyzing one's work, developing the need for constant self-education; collecting and processing bibliographic materials on the topic of the master's thesis, substantiating its relevance, novelty, scientific and practical significance; independent acquisition of new knowledge using modern educational technologies.									
Professional and Pedagogical	**- demonstrate evolving knowledge and understanding of the field of study, based on advanced knowledge of the field, when developing and/or applying ideas in the context of study:** know and understand the grammar, spelling, vocabulary and phraseology of the language being studied; conflict management methods; basic categories and concepts of psychology, the foundations of general psychology and personality psychology, the general foundations of pedagogy and the main stages in	**16**	1	IYa(P) 5202	Foreign language (professional))	FD	UC	3	Exam	GC 6 GC 8 GC 10 GC 11 KC 4 KC 8

	the development of Christian pedagogical thought; fundamentals of psychology, sociology, rhetoric, logic, ethics and culture of business communication; means and methods of persuading interlocutors, the basis of motivation of candidates, sociology of labor. Know and be able to use psychological and pedagogical approaches in teaching special disciplines of master's and bachelor's training, know the regulatory framework for organizing educational activities based on the results of teaching practice. Results **- apply your knowledge, understanding and abilities at a professional level to solve problems in a new environment, in a broader interdisciplinary context:** navigate different areas and communication situations; correctly use linguistic means in the formulation of thoughts; compose dialogues, monologues, polylogues, conversations on various topics and specialties; apply business communication		2	PVSh 5204	Higher Education Pedagogy	FD	UC	4	Exam	KC 9 KC 14 KC 15 KC 18 KC 21 KC 22 KC 23 KC 26 KC 28 KC 29 SC 24
			2	PU 5203	Management Psychology	FD	UC	4	Exam	
			4	PP 6205	Teaching Internship			5	Report defense	

	techniques in professional activities; make effective decisions; correlate theoretical foundations with practical professional activities, analyze, generalize the material being studied, draw conclusions, argue your point of view, critically comprehend and compare modern achievements of science; evaluate the business and psychological qualities of candidates; organize psychological and professional testing; evaluate the results of interviews and testing of applicants. Be able to select and use modern forms and methods of teaching, design a training course based on the results of teaching practice. **- collect and interpret information to form judgments, taking into account social, ethical and scientific considerations:** form judgments on relevant professional and scientific problems; about the significance and consequences of their professional activities; formation of students' motivation for self-education through activation of independent cognitive activity; **- clearly and unambiguously communicate information, ideas, conclusions, problems and solutions to both specialists and non-specialists:** establish contact, maintain a conversation, have synchronous communication skills, be able to negotiate and insist on their legal rights; respond quickly in a non-standard, problematic situation of professional communication. **- learning skills necessary for independent continuation of further education in the field under study:** have the skills to process technical information, master techniques for processing experimental data and information on forms for presenting research results; designing strategies, a systematic approach to the analysis of strategic situations, competent structuring that allows taking into account the connections between the elements of the system, between parts and the whole; Possess: skills of assessing the information base and making decisions in accordance with the economic situation; independent acquisition of new knowledge using modern educational technologies; professional argumentation when analyzing standard situations in the field of upcoming activities; practical work in the financial system at enterprises and scientific research organizations; a creative, research approach to professional activity, acquiring skills in analyzing one's work, developing the need for constant self-education; collecting and processing bibliographic materials on the topic of the master's thesis, substantiating its relevance, novelty, scientific and practical significance; have the skills of independent and creative use of theoretical knowledge in the process of subsequent training in accordance with the curriculum for the preparation of master's students; independent acquisition of new knowledge on management theory and the practice of its development; in orientation in modern psychological literature and the skills of competent understanding of basic psychological terms. Have experience in teaching activities and preparation of didactic materials in the discipline based on the results of teaching practice.									
Management	**- demonstrate evolving knowledge and understanding of the field under study, based on advanced knowledge of the field, when developing and/or applying ideas in the context of the study:** know the subject matter, methods and objectives of management science; laws of nature and society in management; management functions and structure; the concept of management as a science and practice of management; the main roles, functions and skills of managers at various levels of organizational management; principles of socially responsible and ethical management of an organization; structure of the course and basic concepts of marketing; know and understand marketing concepts and be able to compare them; understand innovative	**20**	2	PSU 5210	Advanced Control Systems	FD	EC	5	Exam	SC 1 SC 2 SC 3 SC 4 SC 5 SC 6 SC 7 SC 8 SC 9
			2	SM 5211	Strategic Marketing	FD	EC	5	Exam	

	approaches to management, know advanced technologies and software for optimizing processes, know and understand the organizational structure, personnel policies and methods of development, training and motivation of personnel to achieve the strategic goals of the organization; assessing various types of risks, developing strategies and methods for managing them, as well as mastering management control tools to ensure the efficiency of business processes; **- apply your knowledge, understanding and abilities at a professional level to solve problems in a new environment, in a broader interdisciplinary context:** use modern innovative approaches and technologies in managing an organization in order to optimize processes, increase efficiency and achieve strategic goals. justify the objective need for management; analyze the types of organizational structures of enterprises and recommend the most effective structures, focusing on the internal and external environment of the business; analyze the external and internal environment of the organization, identify factors that have a direct and indirect impact on the activities of a particular company; analyze product positioning on the market; build the structure of the marketing service according to one of the proposed principles; analyze external factors of the marketing environment on the company; analyze the purchasing decision-making process; be able to characterize: changes in the legal status of organizations; various types of property; explain: features of management in enterprises; distinguish between: industrial relations regulated by law and other social norms; develop and economically justify projects to improve personnel management systems and technologies; apply quantitative and qualitative methods of analysis, including functional and cost ones, when making decisions in the field of personnel		1	TBBB 5302	Risk Management and Management Control	CD	UC	5	Exam	SC 10 SC 11 SC 12 SC 13 SC 14 SC 15 SC 16 KC 24
			1	UPUGE 5310	Management Problems in a Globalized Economy	CD	EC	5	Exam	
			1	MUChR 5311	International Management of Human Resources	CD	EC	5	Exam	
			1	UMS 5312	Management of Cross-Cultural Cooperation	CD	EC	5	Exam	
			3	SU 6318	Strategic Management	CD	EC	5	Exam	
			3	UP 6319	Project Management	CD	EC	5	Exam	
			3	UP 6315	Personnel Management	FD	EC	5	Exam	

	management and build appropriate organizational and economic models; in a broader interdisciplinary context: the ability to effectively organize work processes, develop and implement personnel policies, as well as manage and develop personnel to achieve the strategic goals of the organization; conduct a scientific experiment to assess the riskiness of decisions; **- collect and interpret information to form judgments, taking into account social, ethical and scientific considerations:** form judgments on relevant professional and scientific problems; about the significance and consequences of their professional activities. **- clearly and unambiguously communicate information, ideas, conclusions, problems and solutions to both specialists and non-specialists:** establish contact, maintain a conversation, have synchronous communication skills, be able to negotiate and insist on their legal rights; respond quickly in a non-standard, problematic situation of professional communication. **- learning skills necessary for independent continuation of further education in the field of study:** have the skills of independent and creative use of theoretical knowledge in the process of subsequent training in accordance with the curriculum for training specialists; independent acquisition of new knowledge on management theory and the practice of its development; in orientation in modern psychological literature and the skills of competent understanding of basic psychological terms; independent and creative use of theoretical knowledge in the process of subsequent training in accordance with the curriculum for training specialists; time management; effective use of text and other materials (especially television programs); be able to work in teleconference mode; be able to work in a group, be able to take notes, complete written work and prepare for exams; oral presentations, public discussions and analytical presentation of material, political discussions, readiness for compromise and partnership, the ability to influence partners using acquired knowledge; use skills to determine: the order of actions when making management decisions; drawing up samples of standard forms of documents; the ability to implement projects to improve the system and technology of working with personnel into the practice of the organization.									
Business & Information Systems	**- demonstrate evolving knowledge and understanding of the field of study, based on advanced knowledge of the field, when developing and/or applying ideas in the context of research:** knowledge of the discipline "Analytics for Data-Driven Decision Making" covers methods of data collection, analysis and visualization, statistical analysis, modeling, making informed business decisions and ethical aspects of working with data, allowing the use of analytical methods to optimize business processes and make strategic decisions; development and implementation of corporate strategies, management of organizational structure; standards in the field of business information systems; - principles of organizing business information systems in the subject area; business process modeling technologies; basic methods and means of ensuring information security, especially while running online business; know the fundamental principles of assessing the effectiveness of information technologies and systems; know and understand methods and tools to ensure the financial stability and competitiveness of the company, analyze financial risks and take measures to reduce them, as well as develop strategies to strengthen the financial position and competitiveness of the organization. **- apply at a professional level your knowledge, understanding and abilities to solve problems in a new environment, in a broader interdisciplinary context:** the	**15**	2	ADPROD 5208	Analytics for data-driven decision making	FD	UC	5	Exam	KC 24 SC 17 SC 18 SC 19 SC 35 SC 36 SC 37 SC 38
			2	KU 5209 CG 5209	Corporate Governance	FD	EC	5	Exam	
			3	CBM 6320	Cyber Business Management	CD	UC	5	Exam	

	ability to effectively collect, analyze and interpret data, use statistical methods and visualization tools to make informed business decisions and translate these decisions into practical activities to optimize processes and achieve goals; develop and implement corporate strategies, effectively manage the organizational structure, financial resources and risks; apply artificial intelligence systems for implementation in professional activities; model business processes; manage corporate content and Internet resources, processes for creating and using information services, including international ones. - analyze the effectiveness of various Internet marketing tools and develop recommendations for their improvement; analyze financial risks, develop and implement measures to ensure financial stability and increase the competitiveness of the organization within IT-consulting. **- collect and interpret information to form judgments, taking into account social, ethical and scientific considerations:** form judgments on relevant professional and scientific problems; about the significance and consequences of their professional activities. **- clearly and unambiguously communicate information, ideas, conclusions, problems and solutions to both specialists and non-specialists:** establish contact, maintain a conversation, have synchronous communication skills, be able to negotiate and insist on their legal rights; respond quickly in a non-standard, problematic situation of professional communication. **- learning skills necessary for independent continuation of further education in the field of study:** collection, processing and analysis of data; application of statistical methods and data analysis techniques; knowledge of data visualization tools; data-driven modeling and forecasting; effective decision making based on data analysis; application of analytics in business processes and strategic management; skills in managing organizational structure and processes; financial resources and risk management; knowledge of ethical and legal standards in a corporate environment; the ability to form a corporate culture and implement socially responsible management; have skills in managing change and innovation in an organization; own information systems design tools; have the skills to manage corporate content and Internet		1	EB 5307	Electronic Business	CD	EC	5	Exam	
			3	UMKP 6316	International Coaching Project Management	CD	EC	5	Exam	
			3	MPItC 6317	Methodology and Practice of IT-Consulting	CD	EC	5	Exam	
			3	UFBKO 6321	Financial Security Management and Competitiveness of the Organization	CD	EC	5	Exam	

	resources, the processes of creating and using information resources;									
Computer Science	**- demonstrate evolving knowledge and understanding of the field of study, based on advanced knowledge of the field, when developing and/or applying ideas in the context of the study:** know methods for classifying and analyzing text data, machine learning algorithms and their applications; know and understand the architecture of	**15**	2	MO 5206	Machine Learning	FD	EC	5	Exam	SC 25 SC 26 SC 27 SC 28

	computer systems, the fundamental principles of operating systems, the principles of telecommunication networks and data transfer protocols in them, as well as both the basics of computer security and aspects of network resource management; know the strengths and weaknesses of 3D modeling and computer systems design programs; know methods and tools of computer graphics and geometric modeling; basics of vector and raster graphics; theoretical aspects of fractal graphics; basic methods of computer geometry; algorithmic and mathematical foundations for constructing realistic scenes; issues of implementing computer graphics algorithms using a computer; Knowledge of wireless communications fundamentals, standards and protocols, hardware specifications, network architecture, security systems, integration with other vehicle components and industrial and research applications. **- apply your knowledge, understanding and abilities at a professional level to solve problems in a new environment, in a broader interdisciplinary context:** use specialized modules and applications to solve problems in the field of machine learning; set up, maintain and administer computer systems, and design, configure and support telecommunications networks using appropriate protocols and technologies; to achieve specific goals, based on the assigned tasks, choose the optimal graphic editor,		2	VSTS 5207	Computing systems and telecommunication networks	CD	EC	5	Exam	SC 29 SC 30 SC 31 SC 32 SC 33 SC 34
			1	PP 5301	Programming Paradigms	CD	UC	5	Exam	
			1	KP 5308	Computer Design	CD	EC	5	Exam	
			1	PKG 5309	Advanced Computer Graphics	CD	EC	5	Exam	
			1	SMA 5311	Car-to-Car Communication	CD	EC	5	Exam	
			3	PVPS 6314	Design and Implementation of Software Systems	CD	EC	5	Exam	

	develop three-dimensional computer models of objects of any level of complexity; be able to programmatically implement basic raster and vector graphics algorithms; - use graphic standards and libraries; - use modern software in the field of computer graphics development; be able to design, configure and maintain wireless communication systems based on V2V and V2X standards, as well as apply the principles of security and integration with other vehicle components. **- collect and interpret information to form judgments, taking into account social, ethical and scientific considerations:** form judgments on relevant professional and scientific problems; about the significance and consequences of their professional activities. **- clearly and unambiguously communicate information, ideas, conclusions, problems and solutions to both specialists and non-specialists:** establish contact, maintain a conversation, have synchronous communication skills, be able to negotiate and insist on their legal rights; respond quickly in a non-standard, problematic situation of professional communication. **- learning skills necessary for independent continuation of further education in the field of study:** master the skills of working with application programs; skills in setting up and administering computer systems and networks, ability to work with operating systems and use software to maintain computing devices, knowledge of the principles of constructing and operating telecommunication networks and data transfer protocols, skills in ensuring the security of computer systems and networks, ability to solve problems and analyze situations, related to computing systems and telecommunication networks; master various methods for creating 3D models, methods for creating design documentation; know the basic techniques of creating and editing images in vector editors; skills in editing photorealistic images in raster editors; ability to analyze and evaluate various technologies and communication protocols, as well as understand their application in modern vehicles, work with technical documentation: skills in mastering technical manuals, specifications and standards.									
	TOTAL for the whole academic period	**120**								

3. Table of relationships between competencies, learning outcomes, assessment methods and criteria

Dublin Descriptors	EP graduate's competences	Competences formulated in the learning outcomes	Method of Assessment	Criteria for assessing the degree of achievement of learning outcomes (detailed list is given in Appendix 5 «Regulations on KAFU EP Design»)
General Competences				
1. demonstrate evolving knowledge and understanding of the field of study, based on advanced knowledge of the field, in developing and/or applying ideas in the context of the study:	GC 1 GC 10 GC 12	LO 1 LO 3	Recommended assessment methods are presented in the Regulations for the development and approval of EP	C 1.1 C 1.2 C 1.3 C 1.4 C 1.5 C 1.6 C 1.7 C 1.8 C 1.9 C 1.10
2. apply at a professional level their knowledge, understanding and abilities to solve problems in a new environment, in a broader interdisciplinary context:	GC 3 GC 11	LO 7 LO 8		C 2.1 C 2.2 C 2.3 C 2.4 C 2.5 C 2.6 C 2.7 C 2.8 C 2.9 C 2.10 C 4.1 C 4.2 C 4.3

				C 4.4 C 4.5 C 4.6 C 4.7 C 4.8 C 4.9 C 4.10 C 7.1 C 7.2 C 7.3 C 7.4
3. collect and interpret information to form judgments, taking into account social, ethical and scientific considerations:	GC 4 GC 5	LO 5		C 3.1 C 3.2 C 3.3 C 3.4 C 3.5 C 3.6 C 3.7 C 3.8 C 6.1 C 6.2 C 6.3 C 6.4 C 6.5 C 6.6 C 6.7 C 6.8 C 6.9 C 6.10 C 6.11 C 6.12
4. communicate information, ideas, findings, problems and solutions clearly and unambiguously to both specialists and non-specialists:	GC 2 GC 7 GC 8 GC 9	LO 2		C 8.1 C 8.2 C 8.3 C 8.4 C 8.5 C 8.6

				C 8.7 C 8.8 C 8.9 C 8.10 C 8.11 C 8.12
5. learning skills necessary for independent continuation of further studies in the field of study.	GC 6	LO 4 LO 6		C 5.1 C 5.2 C 5.3 C 5.4 C 5.5 C 5.6 C 5.7 C 5.8
KEY COMPETENCES				
1. demonstrate evolving knowledge and understanding of the field of study, based on advanced knowledge of the field, in developing and/or applying ideas in the context of the study:	KC 1 KC 2 KC 3 KC 4 KC 5 KC 20 KC 25 KC 27 KC 30	LO 1 LO 3	Recommended assessment methods are presented in the Regulations for the development and approval of EP	C 1.1 C 1.2 C 1.3 C 1.4 C 1.5 C 1.6 C 1.7 C 1.8 C 1.9 C 1.10
2. apply at a professional level their knowledge, understanding and abilities to solve problems in a new environment, in a broader interdisciplinary context:	KC 6 KC 7 KC 8 KC 9 KC 14 KC 15 KC 18 KC 21 KC 22 KC 23	LO 7 LO 8		C 2.1 C 2.2 C 2.3 C 2.4 C 2.5 C 2.6 C 2.7 C 2.8 C 2.9 C 2.10

	KC 28			C 4.1 C 4.2 C 4.3 C 4.4 C 4.5 C 4.6 C 4.7 C 4.8 C 4.9 C 4.10 C 7.1 C 7.2 C 7.3 C 7.4
3. collect and interpret information to form judgments, taking into account social, ethical and scientific considerations:	KC 11 KC 13 KC 16 KC 19 KC 29	LO 5		C 3.1 C 3.2 C 3.3 C 3.4 C 3.5 C 3.6 C 3.7 C 3.8 C 6.1 C 6.2 C 6.3 C 6.4 C 6.5 C 6.6 C 6.7 C 6.8 C 6.9 C 6.10 C 6.11 C 6.12
				C 8.1

4. communicate information, ideas, findings, problems and solutions clearly and unambiguously to both specialists and non-specialists:	KC 17 KC 24	LO 2		C 8.2 C 8.3 C 8.4 C 8.5 C 8.6 C 8.7 C 8.8 C 8.9 C 8.10 C 8.11 C 8.12
5. learning skills necessary for independent continuation of further studies in the field of study.	KC 10 KC 12 KC 26 KC 31	LO 4 LO 6		C 5.1 C 5.2 C 5.3 C 5.4 C 5.5 C 5.6 C 5.7 C 5.8
SPECIAL COMPETENCES				
1. demonstrate evolving knowledge and understanding of the field of study, based on advanced knowledge of the field, in developing and/or applying ideas in the context of the study:	SC 18 SC 24 SC 34	LO 1 LO 3	Recommended assessment methods are presented in the Regulations for the development and approval of EP	C 1.1 C 1.2 C 1.3 C 1.4 C 1.5 C 1.6 C 1.7 C 1.8 C 1.9 C 1.10 C 9.1 C 9.2 C 9.3 C 9.4 C 9.5 C 9.6

				C 9.7
2. apply at a professional level their knowledge, understanding and abilities to solve problems in a new environment, in a broader interdisciplinary context:	SC 1 SC 2 SC 3 SC 4 SC 5 SC 6 SC 7 SC 8 SC 9 SC 10 SC 11 SC 12 SC 13 SC 14 SC 15 SC 19 SC 27 SC 28 SC 30 SC 32	LO 7		C 2.1 C 2.2 C 2.3 C 2.4 C 2.5 C 2.6 C 2.7 C 2.8 C 2.9 C 2.10 C 4.1 C 4.2 C 4.3 C 4.4 C 4.5 C 4.6 C 4.7 C 4.8 C 4.9 C 4.10 C 7.1 C 7.2 C 7.3 C 7.4 C 9.7
3. collect and interpret information to form judgments, taking into account social, ethical and scientific considerations:	SC 16 SC 17 SC 18 SC 23 SC 25 SC 26 SC 29 SC 31	LO 5		C 3.1 C 3.2 C 3.3 C 3.4 C 3.5 C 3.6 C 3.7 C 3.8 C 6.1 C 6.2

				C 6.3 C 6.4 C 6.5 C 6.6 C 6.7 C 6.8 C 6.9 C 6.10 C 6.11 C 6.12 C 9.2 C 9.3
4. communicate information, ideas, findings, problems and solutions clearly and unambiguously to both specialists and non-specialists:	SC 20 SC 21 SC 22	LO 2		C 8.1 C 8.2 C 8.3 C 8.4 C 8.5 C 8.6 C 8.7 C 8.8 C 8.9 C 8.10 C 8.11 C 8.12
5. learning skills necessary for independent continuation of further studies in the field of study.	SC 23 SC 33 SC 35 SC 36 SC 37 SC 38	LO 4 LO 6		C 5.1 C 5.2 C 5.3 C 5.4 C 5.5 C 5.6 C 5.7 C 5.8

4. Matrix of achievability of the formed learning outcomes in the educational program with the help of academic disciplines (for universities)

№	Name of the Discipline	Brief Description (30-50 words)	Number of Credits	Formed learning outcomes (codes)										
				LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8	LO 9	LO 10	LO 11
Cycle of comprehensive subjects University block/Elective block														
Cycle of fundamental subjects University block														
1	History and Philosophy of Science	Manage international resources, including attracting, developing and retaining talent in a global work environment, mastering methods and strategies for successfully managing cross-cultural cooperation, taking into account differences in values, communication and behavior	4	v	v									

		between different cultures.												
2	Foreign Language (Professional)	The discipline forms the foundations of foreign-language professionally oriented communicative competence of graduate s, which allows them to integrate into the international professional environment and use a professional foreign language as a means of intercultural and professional communication; promotes the development of skills for extracting necessary information from English-language	4	**v**	**v**							***v***		

		sources in typical situations of professional and business communication; forms skills for annotating and referencing professional texts.												
3	Higher Education Pedagogy	The discipline forms graduates' 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 personality. The study of the discipline is aimed at the formation of moral-value and	4	**v**	**v**							***v***		**v**

		professional-personal orientation of graduate s in the modern ideological and spiritual situation of our society.												
4	Management Psychology	The discipline "Management Psychology" continues to study the basics of management and integrates knowledge about the psychological content of management decisions. The study of the discipline allows graduate s to formulate the knowledge necessary for professional activity in the field of managerial work and related managerial relations.	3	**v**	**v**							***v***		**v**

5	Teaching Internship	Pedagogical practice involves independent preparation for conducting training sessions, participation in the development of methodological and educational materials allows you to better navigate the scientific, informational and educational space; direct classes and contact with students allows you to clearly define organizational and methodological stages of work, develops a culture of speech and communication, teaches technically	5	v	v							v		v

		competent to answer questions from graduate s.												
Cycle of fundamental subjects Elective block														
6	Machine Learning	Forms a system of knowledge and skills in the field of machine learning for students. It includes the study of the basic principles, methods and algorithms of machine learning that allow computer systems to learn from data and make automatic decisions. Students will master various types of machine learning tasks, including classification, regression and clustering,	5			**v**		**v**						

		master the skills of data preprocessing, selecting and training models, evaluating their quality and applying them in practice.												
7	Computing Systems and Telecommunications Networks	Forms students' comprehensive knowledge about the work of computer systems and the organization of telecommunication networks. As a result of studying this discipline, students will gain fundamental knowledge and practical skills that allow them to work effectively with computing systems and telecommunications networks	5			**v**		**v**						

		in various fields of activity, ensuring the reliability, security and performance of information systems.												
8	Analytics for Data Driven Decisions	Forms students' comprehensive knowledge about the work of computer systems and the organization of telecommunication networks. As a result of studying this discipline, students will gain fundamental knowledge and practical skills that allow them to work effectively with computing systems and telecommunications networks in various fields of	5					**v**	**v**					***v***

		activity, ensuring the reliability, security and performance of information systems.												
9	Corporate Governance	Examines the theoretical foundations of corporate governance. Allows you to get and develop skills in analyzing and diagnosing corporate governance problems, modern methods of solving corporate governance problems, and also introduces the modern specifics of corporate governance in domestic and foreign organizations; forms a holistic view of corporate governance	5					**v**		**v**			**v**	

		and its specifics in domestic organizations; develops skills for diagnosing problems using the tools of decision-making methods in the field of corporate governance. management.												
10	Advanced Fields of Management	Forms an in-depth study of various advanced areas in the field of management. It is based on the basic principles and concepts of management, but focuses on more specialized and in-depth topics. Within this discipline, graduate s will develop critical thinking, analytical thinking and	5						**v**	**v**	**v**			

		decision-making skills based on modern management methods and tools.												
11	Strategic Marketing	Studies and systematizes the fundamentals of the theory and practice of strategic management of marketing activities in modern conditions. Forms an understanding of the essence, principles, functions of strategic marketing management, as well as directions and methods of marketing management at the enterprise; knowledge of the development and implementatio	5						**v**	**v**				

		n of marketing strategies, marketing plans and programs (pricing, commodity, communicatio n, sales policy); introduces the processes of organizing marketing activities, building organizational marketing structures, functional and job responsibilities specialists of marketing services.												
Cycle of Core Subjects University block/Elective block														
12	Prog ram min g Para dig ms	The discipline "Programming paradigms" forms a system of knowledge among graduate s about various programming paradigms, including	5			**v**	**v**						**v**	

		imperative, object-oriented, functional and logical approaches. Students learn the basic concepts and principles of each paradigm, as well as gain practical skills in working with the relevant programming languages. The goal is to develop flexible thinking and the ability to choose the most appropriate paradigm for solving programming problems in various fields and situations.												
13	Risk Management and	Teaches graduate s the basics of risk management and control in the	5					v		v	v			

	Management Control	organization. The purpose of this discipline is to develop an understanding of the role of risk management and control in ensuring the sustainable functioning of the organization. It allows you to develop the skills and knowledge necessary to identify, analyze, evaluate and manage risks associated with business processes and strategic decisions.												
14	Business Information Systems	Highlights the role of information systems in modern organizations and their impact on business	5					v	v					

		processes and decision-making. The purpose of this discipline is to develop an understanding of the role and importance of information systems in modern business. As part of the training, graduate s will learn various types of information systems, such as enterprise resource management systems (ERP), customer relationship management systems (CRM) and project management systems.												
15	Research practice	Research practice contributes to the formation of graduate s' research skills,	8	**v**			**v**	**v**	**v**			***v***		

		the acquisition of experience and skills for independent theoretical training. During this internship, graduate s, under the guidance of their supervisors, conduct scientific research in accordance with an approved individual plan, characterized by significant relevance and practical significance.												
16	Science Communication	The purpose of the course is to familiarize graduate s with modern trends in higher education in the field of training highly qualified personnel of the third level	5	**v**	**v**							***v***		**v**

		and the development of communication skills in scientific activity. The course pays special attention to the communicative aspects, taking into account the specifics of scientific work in the information society. As a result of completing the course "Scientific Communications", graduate s get an idea of the opportunities that scientific activity provides, as well as form a desire for self-realization through various strategies of scientific work and career											

		development.												
17	Car-to-Car Communication	The purpose of the discipline Car-to-Car Communication is to study the principles and technologies of information exchange between cars using wireless communication technologies. The course is aimed at developing the skills of understanding, designing and implementing communication systems between cars in order to improve road safety and efficiency.	5			**v**		**v**						
18	Digital Business Modelling	Develops in master's students the skills and knowledge necessary for digital modeling of business	5					***v***	***v***				**v**	

		processes and designing information systems. The aim of the discipline is to develop students as specialists capable of applying their knowledge in a practical context. Within the framework of this discipline, master's students study the theoretical foundations of developing information systems of various classes, as well as methods and approaches to their modeling and design.												
19	Computer Science Project	The purpose of the discipline "Digital Business Models" is to study and understand digital business	5				v	v						

		models and their impact on modern organizations. The course is designed to develop students' knowledge and skills necessary for the analysis, development and implementation of digital business models based on the use of information technology and digital platforms												
20	Advanced Computer Graphics	It allows students to achieve a deep understanding of the basic concepts and principles of computer graphics, master advanced techniques and algorithms, develop skills in working					٧	٧						

		with professional graphic tools and software, as well as the ability to develop computer graphics applications and effects.												
21	Managerial Challenges in the Globalized Economy	It allows students to achieve a deep understanding of the basic concepts and principles of computer graphics, master advanced techniques and algorithms, develop skills in working with professional graphic tools and software, as well as the ability to develop computer graphics applications and effects.	5							**v**	**v**			
22	Inter	Studies the	5							**v**	**v**			

	national Human Resource Management	basic principles, strategies and practices of human resource management in the context of the international activities of organizations. The purpose of this discipline is to form graduate s a deep understanding of the peculiarities of personnel management on a global scale and to develop the skills necessary for effective management of international teams and personnel. As part of their studies, graduate s study international standards and												

		laws governing human resource management in different countries.												
23	Management of Intercultural Collaboration	Focuses on the study of principles and practices necessary for effective management of teams and organizations in an intercultural environment. The purpose of this discipline is to form graduate s' deep understanding of cultural differences, the ability to adapt to them and the development of skills for effective intercultural cooperation. As part of the training, graduate s study the importance of	5							**v**	**v**			

		intercultural competence and its impact on team and project management.												
24	Change Management	Studies the principles, methods and strategies necessary for effective change management in the organization. It is aimed at developing graduate s' skills and competencies necessary for the successful implementation of changes and management of change processes in a dynamic and unstable environment. Graduate s gain an understanding of the process of change, develop the	5	v	v				v			v		

		ability to analyze, plan and implement changes in an organizational context												
25	Design and Implementation of Software Systems	Forms a holistic understanding of the process of designing and implementing software systems for graduate s. It is aimed at developing the skills and competencies necessary for effective participation in the development of software projects. Within the framework of this discipline, graduate s learn to analyze the requirements for a software system, design architecture and choose	5			v	v		v					

		suitable development technologies. They study software development methodologies and learn how to put them into practice.												
26	Personnel Management	Forms an integral system of knowledge among graduate s about the patterns of formation and development of the subsystem of human resource management of the organization as the most important element of the management system of the organization as a whole, as well as mastering the skills and abilities of the organization's	5		**v**					**v**	**v**			

		personnel management by a graduate student. Studies modern interpretations of the conceptual apparatus of personnel management, the identification of the concepts themselves, the conceptual foundations of personnel management, quantitative analysis of the composition and structure of the personnel potential of the enterprise.												
27	International Coaching Project Manage	Students gain in-depth knowledge of project management methods and techniques using coaching approaches. They master	5			**v**					**v**			

	ment	key project management concepts and develop coaching skills to effectively interact with teams and achieve set goals. The course includes the study of planning strategies, risk assessment, resource management and communication in an international context.												
28	Methodology and practice of IT consulting	As part of the training in the discipline "Methodology and practice of IT consulting", students learn to apply specialized methods and tools to solve problems in the field of information technology and consulting.	5			**v**					**v**			

		They study the basics of consulting processes, including analyzing business requirements, developing strategies for implementing IT solutions, evaluating project effectiveness and managing changes. The course also covers practical aspects of the work of an IT consultant, including interaction with clients, formulating proposals, project management and presenting results.												
29	Strategic Management	Studies the principles, methods and tools necessary for the development	5							**v**	**v**			

		and implementation of strategic decisions in the organization. It is aimed at developing graduate s' skills and knowledge necessary for effective management of the organization in the long term. As part of the training, graduate s study the basic concepts and models of strategic management, analyze the internal and external environment of the organization, identify strengths and weaknesses, opportunities and threats.												
30	Project	Forms the necessary					v			v	v			

	Management	amount of fundamental and applied knowledge, as well as practical skills that are essential for successful project management for graduate s. This includes mastering key concepts and principles of project management, understanding various methodologies and approaches, as well as mastering the tools and techniques necessary for effective planning, control, organization and communication within projects. The course is aimed at												

		ensuring that students receive not only theoretical knowledge, but also be able to apply it in practice, developing their skills in project management.												
31	Electronic Business	As a result of studying the Electronic Business course, students gain an in-depth understanding of e-commerce concepts and terminology, analyze various business models, study technological tools, and develop strategies necessary for successful functioning in the online environment.	5					***v***	***v***					

		They acquire practical skills, including creating business plans, developing online stores, and analyzing cases.												
32	Financial security and competitiveness management of the organization	Provides students with a comprehensive understanding of the principles and practices of financial resource management and improving competitiveness in organizations. This includes the development of skills and knowledge related to financial risk management, financial analysis, financial planning, marketing and strategic management.						v	v	v				

		The key objectives of the discipline include: developing the ability to identify and reduce financial risks that may affect the stability and growth of the organization												

APPROVED:

Reviewed by Education and Research board of the university, minutes № 5 on 25.04.2025.

Chairmain of Education and Research board of the university _____ Zh.E. Baikenov

Director of Academic Department _____ A.M. Mukazhanova

РЕКОМЕНДОВАНО:

Академическим комитетом, протокол №5 от 17.04.2025 г.

Рекомендована Академическим советом, протокол №5 от 17.04.2025 г.

Зав.кафедрой _____ И.В. Бордияну

Department Head _____ I.V. Bordiyanu

РАЗРАБО

Академич