CONTENT

1. CHARACTERISTIC OF THE EDUCATIONAL PROGRAM
7M01510-Computer Science

The purpose of the educational program: training masters of education who are able to carry out scientific projects and research in the field of digital education

1. 1.General information about the educational program

Type of educational program	current
Name of the educational program	7M01510-Computer Science
Scope of the educational program	7M01 Pedagogical Sciences
Training area	7M015 Training teachers in natural science subjects
Group of educational programs	M012 - Training of computer science teachers
Educational activity management license No., date, month, year	The educational program is implemented on the basis of the appendix to the License No. KZ75LAA00018542 dated August 04, 2020 the direction of personnel training 7M01510-Informatics, issued by the RSU"Committee forQuality Assurance in Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan".
Number in the OP registry and date of registration/update	
NRC level	Master's degree, level 7
Degree awarded	Master of Education the educational program 7M01503-Computer Science
Accreditation of an educational program	
Educational program Rating	
Total academic credits	90
Duration of training	1.5 years

1.2. VISION, MISSION, PROGRAM GOAL, VALUES, ATTRIBUTES OF A UNIVERSITY GRADUATE

Vision:

An intelligent platform that develops teachers who can manage in a rapidly changing world.

Mission statement:

Formation of teachers of leaders who are able to create, develop and disseminate advanced knowledge and values in the field of education for the benefit of the country and the world.

Program goal:

The University aims to become a hub for innovative teaching, learning and research methods, as well as the development of rural education in Central Asia.

Values:

Integrity, dedication, caring for others

Attributes of a University graduate:

• Self-taught, able to reflect and explore their practice
• Have moral and ethical qualities and are responsible
• Have deep subject, digital knowledge and a broad intellectual outlook
• Creative and critical thinking, collaborative and communicative
• Practice leadership in teaching and learning, and are adaptable to rapidly changing conditions
• Diverse, inclusive and for equal opportunities in society

1.3 Justification of the educational program

Description of educational program

Topics of educational programs. The master of pedagogical science program in the educational program 7M01503-computer Science is determined by the results of training, which are formed on the basis of the Dublin descriptors and are expressed through the competence of personal, General cultural and professional training.

The presence of an academic master's degree in the scientific and pedagogical direction is the main qualification requirement for admission to work at the University.

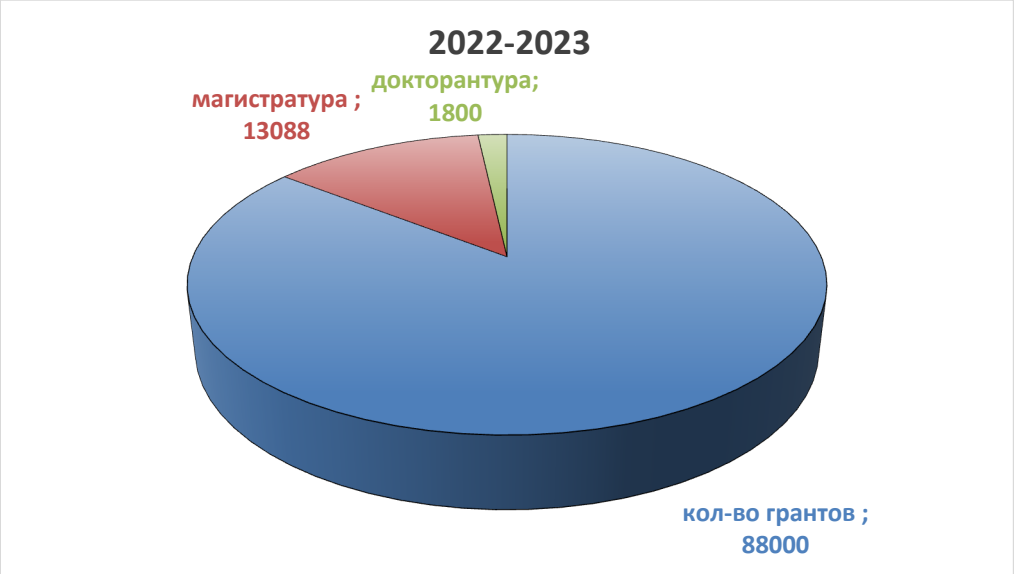
The uniqueness of the educational program 7M01503-Informatics: achievement of a high level and quality of independent research and professional activity of undergraduates; training of highly qualified scientific and pedagogical personnel for higher and postgraduate education and research, who are able to contribute together with their scientific research to expanding the boundaries of education and knowledge in the field of informatics, teaching methods, etc. computer science.

Market need.

Statistical analysis was carried out on the basis of the national report on the state and development of the education system of the Republic of Kazakhstan (based on the results of the 2018-2019 academic year), prepared by JSC "Information and Analytical Center" by order of the Ministry of Education and Science of the Republic of Kazakhstan.

In the 2023-2024 academic year, about 88,000 grants were allocated to all levels of higher programs.

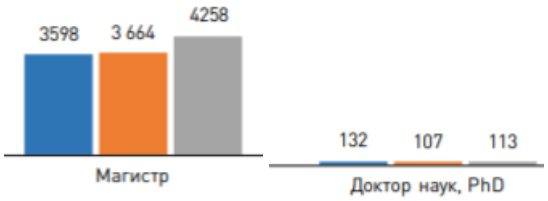
The state educational order for three levels of higher education for the 2022– 2023 academic year amounted to more than 88 thousand grants. A total of 13,088 and 1,800 units have been allocated for the training of masters and PhD students, respectively.



Over the past three years, the number of doctoral students has increased by 19.1%. In 208, the number of doctoral students increased by 5,609, and in 2020-by 1,305 students.

Number of students enrolled in postgraduate education programs, 2018-2020, pers.

With the transition to a three-stage training system in 2020, there is a decrease in the number of teachers with a PhD degree. In 2020, the number of teachers with a PhD degree was 113, which is 19 people less than in 2018.



1.4. FEATURES OF THE EDUCATIONAL PROGRAM

It coincides with similar OP programs of leading universities of the far and near abroad.
45%-Anatolian University (Anadolu Universitesi)
40%-Moscow State Pedagogical University

1.3. Justification of the educational program

1. 1)Professional standard "Teacher", approvedOrder of the Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" No. 133 dated June 8, 2017
2. 2)ORC of the education sector,approved by Protocol No. 2 of the meeting of the sectoral Tripartite Commission on Social Partnership and Regulation of Social and Labor Relations under the Ministry of Education and Science of the Republic of Kazakhstan dated November 23, 2016

1.4. Features of the educational program

Features	Short description
Two-degree education program	For the implementation of two-degree programs, there"degree ", a double degree program between the State University of the Mississippi Valley (Itta Bene, USA) and Kazakh National Women's Pedagogical University(November 8, 2019).

1.5 Potential direction and jobs of the graduate

- teacher - secondary and specialized schools, lyceums, gymnasiums, colleges;
- tutor, coach, specialist-teacher training institutions;

- specialist -departments of education;
- specialist - state and non-state educational institutions;
- specialist - other organizations that use computer-based educational technologies in their professional activities.
- research associate research institutions and centers of informatization of education;
- specialist -organizations of the educational system of various forms of ownership that use computer technologies in their work.

1.6 **Areas of professional competence (maximum 3-5 areas)**
- possesses professional-level knowledge for the implementation of pedagogical, scientific, managerial activities in research institutions and centers of informatization of education;
- organizes and conducts research work in general education and specialized schools, lyceums, gymnasiums, colleges, pedagogical institutions and higher educational institutions;
- plans the content of the computer science course in educational institutions, applies innovative methods in teaching;

1.7 **Learning outcomes of the educational program**

Program learning outcomes:

LO1 –Oriented in the actual problems of management and own the professional basics of speech communication (listening, reading, speaking, writing) skills in working with business correspondence (writing, e-mail and others);

LO 2. To present the theoretical and methodological foundations for the development of the science of psychology, the management and knowledge processes, the nature and content of psychological and pedagogical research

LO 3.Analyzes data using various methods of digital technologies, computer modeling and data analysis, and implements methods for evaluating results in the educational process.

LO 4- Develops digital educational resources for blended and online learning in high-level programming languages through individual or team work

LO 5- Organizes educational and creative activities of students using advanced pedagogical technologies and products of innovative systems

LO 6- Develops software products, mobile and web applications used in professional and practical activities

LO 7- simulates applied tasks in the field of computer technology critically evaluating the results of scientific work in this field through data mining

Matrixcorrelation of OP learning outcomes with graduate attributes

	LO1	LO2	LO3	LO4	LO5	LO6	LO7
GA1	+	+	+	+	+	+	+
GA2	+	+					
GA3				+	+		
GA4	+	+					
GA5		+	+			+	+
GA6		+		+	+	+	+

1. 2CONTENT OF THE EDUCATIONAL PROGRAM

2.1 Description of modules

№	Description of modules	Total number of credits	№	Name and code of the discipline	Acad. credit.	Cycle / Component
1	**ISE** Integration of science and education	12	1	ISE 501Management	2	UC
			2	ISE 502 Foreign Language(Professional)/	2	UC
			3	ISE 503 Management Psychology	2	UC
			4	ISE504/1 Teacher Management and Educational Marketing	6	OC
			5	ISE504/2 Leadership in Science and Education		
2	**PTCS** Problems of teaching computer science	20	6	PTCS 501/1 AR and VR in education	4	OC
			7	PTCS 501/2Modern problems of pedagogical technologies		
			8	PTCS 502/1Computer simulation of applied problems	5	OC
			9	PTCS 502/1 Technology for organizing students ' research work		
			10	PTCS 503/1CLIL method in computer science education	5	OC
			11	PTCS 503/2 Digital technologies in inclusive education		
			12	PTCS 504/1Development of training applications	6	OC
			13	PTCS 504/2Development of elective courses inscience		
3	**DTSE** Digital technologies in science and education	22	14	DTSE501Digital Culture in Education	5	OC
			15	DTSE502/1 Creating and using digital educational and Internet resources	6	OC
			16	DTSE502/2 Digital technologies in scientific research		
			17	DTSE503/1 Web design in Python	5	OC
			18	DTSE503/2 High Level Programming		
			19	DTSE504/1 inResearchInstitute	6	OC

			20	DTSE504/2 Digital Transformation of Education		
4	**RW** Research work	36	21	Production practice	10	UC
			22	Experimental research work of a master's student, including internship and implementation of a master's project (EIRM)	18	UC
				Academic writing		
				Research methods		
			23	Design and defense of a Master's degree project	8	FE
Total:		**90**			**90**	

Appendix 2
Information about disciplines (template)

№	Name of the discipline	Component / Cycle	Acad. loans	Description of the discipline (30-50 words)	Training methods	Target ROS	Evaluation methods
Cycle of basic disciplines ***University components***							
ISE Integration of Science and Education The discipline"Foreign language" is designed to develop communication skills in a foreign language in the professional sphere. Within the framework of the module undergraduates study specialized vocabulary and grammar, as well as practice in oral and written speech. The expected result is an increase in the level of foreign language proficiency, which will allow undergraduates successfully work in an international environment. discipline"Management" is aimed at the formation of knowledge and skills in managing an organization. Undergraduates study the theoretical foundations of management, methods of planning, organizing and controlling business processes. The expected result is an improvement in students ' ability to make decisions and manage the organization's resources. discipline"Management Psychology" focuses on the study of psychological aspects of personnel management. Undergraduateslearn about the theories of leadership and motivation, psychological features of teamwork and conflictology. The expected result is to increase the efficiency of personnel management and reduce the level of conflicts in the team. The discipline"Pedagogical management and educational marketing" is aimed at studying methods and techniques of managing educational organizations. Undergraduateslearn about pedagogical management technologies, marketing strategies, and tools for promoting educational services. The expected result is an improvement in the quality of educational services and an increase in the numberundergraduates. discipline"Leadership in Science and education" is focused on the formation of leadership skills in the professional sphere. Undergraduatesstudy leadership theories, methods for developing leadership qualities, and learn about leadership practices in science and education. The expected result is an increase in the level of leadership qualities and the effectiveness of management in professional activities.							
1	Management	UC	2	**The management** course reveals the content of management, forms a set of knowledge about the basic principles and methods of modern management, its role in ensuring the life and competitiveness of the organization, develops specific skills for implementing various types of management activities, analyzing management	Training workshop Educational discussion Round table discussion	PO1, PO2	Written form

				systems and designing, and also logically consistently examines the historical prerequisites for the development of management theory, will serve to form professional competencies and skills of managers.			
2	Foreign language(professional)/	UC	2	The course is aimed at ensuring practical mastery of a foreign language, the formation of intercultural and communicative competence of undergraduates in non-linguistic areas of training in the process of foreign language education at the level of super-basic standard (C1). The discipline expands and improves the language skills of undergraduates in the context of their professional activities. The course includes the study of specific vocabulary, terminology and communication strategies relevant to the subject area of the master's program. Students are introduced to professional texts, documentation and communication situations that may arise in their future career. Through listening, reading, writing and speaking, students develop skills to communicate effectively in a foreign language in a professional context. Particular attention is paid to the development of presentation, negotiation and written correspondence skills.	Training workshop Educational discussion Round table discussion	PO1, PO2	written form
3	Management psychology	UC	2	Master's students analyze the psychological aspects of leadership, including motivation, leadership, communication and conflict management. Particular attention is paid to psychological methods of personnel management and organizational change. Master's students study the application of psychological concepts to the management of educational institutions, developing skills in analysis and decision-making in complex situations. The course also includes case studies and scenarios to prepare	Training workshop Educational discussion Round table discussion	PO1, PO2	written form

				undergraduates for effective leadership and management in an educational environment.			
Cycle of basic disciplines ***Optional components***							
The module "Innovative technologies in Education" is designed to expand teachers ' knowledge and skills in the use of AR and VR technologies in the educational process. One of the main goals of the module is to increase the motivation of teachers to use new technologies in their work, which in turn should lead to an improvement in the quality of education. Within the framework of the module, participants will get acquainted with the basic principles of work and practical application of AR and VR technologies in training, as well as modern problems of pedagogical technologies. In addition, the use of computer modeling of applied problems, the technology of organizing research work of students and the CLIL method in teaching computer science will be considered. An important part of the module is the development of Smart learning applications that will help students learn more effectively and interactively. Participants will also get acquainted with digital technologies in inclusive education, which will provide an opportunity to better adapt to the needs of students with different characteristics. The expected results of the module are: increasing the level of competence of teachers in the use of AR and VR technologies in education, improving the quality of education, expanding the capabilities of teachers in organizing research work of students, as well as creating Smart training applications that can be used in the educational process.							
4	AR and VR in education	OC	4	Virtual reality. Augmented reality. Representation of the subject area of education in a multidimensional system. Using virtual reality in education. Using augmented reality in education. Safety of using virtual reality and augmented reality in education. Use of virtual and augmented reality (VR and AR) technologies.	Informative and problematic presentation Case study	RO4, RO5, RO6	Written form
5	Current problems in pedagogical technologies	OC		The essence of pedagogical technologies. Implementation and management of curricula and projects. About pricing of training programs and projects. Information management and training. Automated and			

				electronic systems for ensuring the educational process of the organization. Current trends and problems in primary education. Current trends and problems in secondary education. Current trends and problems in higher education. main problems of introduction of pedagogical technologies. Organization of independent work. Development of creativity. Formation of a communicative culture. Support of the teacher's activities. Development of pedagogical technologies.			
6	Web design in Python	OC	5	Basics of Web 2.0 applications. Basics of HTML and CSS. A practical introduction to the Python programming language for Django. Development of modern web applications in the Python programming language using Django. Web forms in Django. Validation. JavaScript. Administrative section of Django. Authentication and authorization in Django. Using databases in Django. SQLite. Models in Django. Development of an online project.	Study Coaching services Informative and problematic presentation	RO4, RO6	Pismenny
7	High-level programming	OC		Application of principles, methods and tools for high-level software development, programming paradigms, modern programming technologies, security and data protection, programming in			

				modern programming languages, software testing and support.			
Cycle of profile disciplines ***University components***							
"Creating and using digital educational and Internet resources" is designed to teach students how to create and use digital educational resources in the educational process. The module includes the following topics: Digital Culture in Education, Web design in Python, and Online Platforms in Education. Within the framework of the module, undergraduates will learn the basic principles of creating digital educational resources (including the use of graphics, sound and video), learn about various teaching methods (distance learning, online courses, mobile learning, etc.) and get acquainted with the most popular online platforms used in education. Undergraduates will also gain practical skills in developing web applications in Python. They will learn the basic concepts of Python, learn how to use HTML, CSS, and JavaScript to create web pages, and work with databases and various APIs. As a result, students will be able to create full-fledged web applications from idea to implementation. Expected results of the module include the ability to create and use digital educational resources in various fields of education, as well as an understanding of the basic principles of online platforms and web technologies. Undergraduates will gain practical skills in creating web applications in Python and will be able to apply them in their future work.							
8	Digital culture in education	OC	5	The discipline examines the areas of digital culture research, virtual space, socialization of the network, Internet content, and social networks. The discipline develops the skills of using information and communication technologies in professional activities, solving digital problems in a digital environment, analyzing digital resources using various	Training workshop Educational discussion Round table discussion	RO4, RO5	Written form

				methods and strategies (case studies, visual, comparative studies). The expected result of mastering the course is to increase the level of digital culture masterTechnology, as well as their readiness to use information technologies in the educational sphere. This will help them apply new technologies in their activities, increase the efficiency of the educational process and train highly qualified specialists in various fields.			
Cycle of profile disciplines ***Optional components***							
9	Pedagogical management andeducational marketing	OC	6	Marketing as a direction of management activity. Educational marketing concept. The essence and features of marketing in the field of education. Subjects and objects of marketing of an educational organization, their functions. Marketing environment of educational organizations. Managing marketing activities in an educational organization. Competitive position of educational organizations in the market of educational services. Model of marketing monitoring of the labor market of teachers. Program of consumer monitoring of the quality of education in higher education institutions.	Role-playing games Competence-based learning	RO2, RO5	Written form

10	Leadership in science and education	OC		Theoretical and practical problems of leadership in education and science. Analysis of approaches to leadership as a tool for personal development of teachers and researchers. Leadership in education as a kind of social type of leadership. Leadership functions of the head of education. Styles of activity of leaders in education. Formal and informal leadership in the practice of education. Head of the education system or educational institution as a leader. Requirements for leaders in education and science. Conditions for the development and realization of individual leadership potential in education and science.			
11	Computer modeling of applied tasks	OC	5	Concepts of model and modeling. Classification of abstract models. The concept of a computer model. Basic definitions and types of models. The concept of numerical and mathematical modeling. Areas of application of computer modeling. Stages and goals of computer modeling. Formalization and algorithmization of computer models. Fundamentals of computer-aided design systems. Organization of computer experiments. Some programming techniques in modeling. It includes the study of methods and tools for computer modeling of various applied	Problem-based modular training	RO3, RO7	Written form

				problems. As part of the course Undergraduates study mathematical models and methods necessary for creating, developing, and analyzing computer models.			
12	Technology of organizing students ' research work	OC		Organization and conduct of . The role of research in a person-centered approach to learning. Research work of students in the framework of the implementation of state standards. Organization of research activities. Stages of research activity. Choosing a research topic. Research work. Reporting and presentation stage. Reasons for the decline in students ' creative activity. The problem of attracting students to engage in research activities. Forms and technologies of organizing research activities			
13	The CLIL method in computer science education	OC	5	Theoretical foundations of technology. Modern methods and technologies of integrated training and diagnostics. Issues of organizing students ' cooperation aimed at developing subject-language activities in an integrated educational process. Creative abilities to diagnose and evaluate the quality of the educational process. Formation of the educational environment, implementation of innovative educational policy objectives. Solutions to research problems.	CLIL Insert Audio-linguistic Business Games	RO4, RO5	Written form

				Main aspects of the subject-language integrated methodology CLIL in computer science teaching			
14	Digital technologies in inclusive education	OC		Types of digital technologies used in inclusive education. Benefits of usingdigital technologies to support inclusive education. Analysis of the policy of applyingdigital technologies in inclusive education. International legislation. Implementation of policyat the state level. Policy recommendations on the usedigital technologies to support inclusive education. Support for teachers and students. Development of curricula for inclusive education.			
15	Creation and use of digital educational and Internet resources	OC	6	The concept and types of digital educational resources. Objectives of using digital educational resources in teachingsciencesecondary school students. Basic pedagogical tools for developing digital educational resources. Didactic and multimedia principles of digital content development. Analysis of existing digital educational resources ininformaticsfor general education schools of the Republic of Kazakhstan-iMektep platform.kz, Bilimland.kz, daryn.online, Openu.kz, etc. Development of an electronic educational resource onsciencefor primary secondary schools	Discussion Partially-search Study Case study Role-playing games	RO3, RO7	Written form

16	Digital technologies in scientific research	OC		The main means of digital technologies used in scientific activities. Search for scientific information from international Internet resources. Basic rules for preparing a scientific text. Basic tools and methods for processing research results. Working with scientific information (Web ofscience, Scopus, etc.Work in the information and educational space. Preparation of dissertation research papers. Processing of research results. Search engines in the fields of scientific research (google scholar, ResearchGate, etc.) Scitech-a cluster of technologies for implementing the development of scientific projects and programs.			
17	Digital technologies in pedagogical research	OC	6	Study of modern digital technologies and their application in educational research. Application of digital technologies in educational research. Implementation of methods and tools for data collection, data analysis, big data in educational analytics, data protection ethics, application of research results.	Discussion Partially-search Study Case study Role-playing games	RO4, RO6	Written form
18	Development of elective computer courses	OC		The concept of pedagogical design. Analyze the needs of the target audience, their competencies, and expected learning outcomes. Defining the goals and objectives of the training material. Analyze and structure materials according to your goals. Selection of teaching			

				tools and methods. Create course elements, style, and visual design. Development of tests and tasks, control tools, and information collection. Create a course using appropriate tools, or set tasks for team members to develop specific elements. Uploading the course to the Learning Management System (LMS). Development of methods for evaluating the results and effectiveness of materials. Development of solutions for further improvement of educational content.			
19	About offline platforms in about Research Institute	OC	6	Overview of online learning platforms and services in education and their capabilities. Tools for creating online courses. Content support, creation of online courses. Manage users. Online learning platforms:Coursera,khanacademy, Bilim media Group,Daryn Online,Opiq, NIS Play,Atameken Academy,Blended learning. Using online services to create a training course. Online platforms in education, network technologies, interactive technologies and Internet services.	Problem-based modular training	RO4, RO6	Written form
20	Digital transformation of education	OC		Digital transformation of education: prospects and challenges. Updating the content of education. Key aspects of digital transformation of education. Digital transformation of			

				education:world and domestic experience. Model of digital transformation of an educational organization. Universal principles and schemes. "Mass personal" education. Transformable activities at school. Digital educational environment. Stages of digital transformation. Digital gaps. Digital transformation of educational activities in the country. IT infrastructure. Unified Digital Platform Services			
RW Research Project **Module Description:** module involves completing a Masterofpractical course in an educational institution or enterprise, as well as performing research work and writing a master's thesis. The purpose of this module is to develop the professional competenciesstudentin the field of his specialization. During this modulestudentwill learn to use various research methods, get acquainted with modern technologies and trends in their field, as well as conduct their own scientific research to solve current problems. As a result of the internshipstudentexpects to gain practical skills in their professional field, expand their knowledge and experience of working with leading specialists in the labor market, as well as develop teamwork skills. An integral part of this module is the implementation of research work, which allowsmasterdevelop their scientific abilities and acquire practical skills in solving current problems in their professional field. As part of the researchstudentexpects to receive new knowledge, results and assessments that can be used for further scientific development of this field. At the end of this modulestudentmust write a master's thesis. Writing a dissertation requires amasterhigh knowledge and skills in research activities, as well as proficiency in academic writing. The result of writing a dissertation should be a defense, which will indicate the successful completion of this module.							
21	Production practice	UC	6	Develops the skills of a research teacher who knows modern scientific tools for searching and interpreting information material on specialized subjects for use in teaching activities	Practical work	-	Report

22	Experimental research work of a master's student, including internship and implementation of a master's project (EIRM)	RW	2	Develops the master's student's ability and practical skills to independently carry out scientific research related to solving complex scientific and technological problems in the field of training in innovative conditions	Experimental and practical work	-	Report
23	Experimental research work of a master's student, including internship and implementation of a master's project (EIRM)dissertations (NIRM)/	RW	1	Develops the master's student's ability and practical skills to independently carry out scientific research related to solving complex scientific and technological problems in the field of training in innovative conditions	Experimental and practical work	-	Report
24	Experimental research work of a master's student, including internship and implementation of a master's project (EIRM)	RW	15	Develops the master's student's ability and practical skills to independently carry out scientific research related to solving complex scientific and technological problems in the field of training in innovative conditions	Experimental and practical work	-	Report
25	Design and defense of a Master's degree project	FE	12	Master's project preparation, defense	Completion of the project, registration	-	Protection
	Total:		**90**				

3. RESOURCE AVAILABILITY OF THE EDUCATIONAL PROGRAM

3.1 Library collection

One of the most important indicators of the quality of personnel training in the educational program is the provision of studentseducational, methodological, scientific, reference, and periodicals.

The library fund for OP 7M 01503-Informatics as of May 1, 2021 is 1,076,648 copies, of which 94,3980 are in the state language and 10519 publications are presented on electronic media. Using the program "KABIS" (Kazakh Automated Library and Information System), such processes as book search and ordering, accounting of the library's book collection and maintaining attendance statistics are automated.

Provision of a book for 1 master's student in the higher educational institution of Informatics: number of copies-32319; book supply -184.

The University Library provides students and teaching staff with access to databases: IPR books, Polpred, Alembook, Web of Science, Elsevier (Scopus).

Access to the Republican Interuniversity Electronic Library (RSEB), which combines electronic educational and scientific resources of higher education institutions of the Republic of Kazakhstan, has been provided.

Undergraduates of the educational program are provided with access to the following scientific journals tothe Thomson Reuters corporation, hosted on the Web of Knowledge platform, the Springer, Plenipotentiary, IPRbooks database, the Republican Interuniversity Electronic Library (joint activities of the parties aimed at creating information resources) concluded with the Association of Higher Education Institutions of the Republic of Kazakhstan.

Since 2010, the library provides an opportunity for students of Kaznatszhenpu to get acquainted with the content of master's theses in the traditional format (more than 150 titles), half of which, to date, have been translated into PDF format.

Also, undergraduates can use the service "Electronic Library of Kaznatszhenpu", which provides access to the electronic library from a computerfromanywhere in the world in 24/7 format (website address:lib.kazmkpu.kz). The elector library database offers students about 10,000 unitstext sources, more than 1,000 units licensed books, 6676 units scanned by library staff, and about 300 units of books belong to the rare fund sources.

3.2 Human resources management

The educational program is implemented by the Department of Informatics and Applied Mathematics. Quantitative and qualitative indicators of teaching staff serving the educational program (disciplines of basic and profile cycles):

The total number of teaching staff is 33 people, including::
Doctor of Science – 2
Candidates of Sciences – 7
D – 2 Doctors
Masters – 23
Osepenennost OP –30%.

The qualification characteristics of the teaching staff of the educational program are reflected in**Personnel Directory.**

3.3 Material and technical base

Practical and laboratory classes in the educational program are conducted in 16 computer classes:

1. 1.computer class 1-13 seats (47.1 sq. m)
2. 2.computer class 2-11 village places (70.7 sq. m)

3. 3.computer class 3 – 13 seats (87.2 sq. m)
4. 4.computer class 4-12 seats (69.9 sq. m)
5. computer class 5-13 seats (86.9 sq. m)
6. 6.computer class 6-12 village places (70 sq. m)
7. computer class 7-15 seats (87.1 sq. m)
8. 8.computer class 8-12 village places (70.7 sq. m)
9. 9.computer class -9 16 seats (87.7 sq. m)
10. computer class 10-10 seats (47.1 sq. m)
11. computer class 11-11 village places (69,9 sq. m
12. 12.computer class 12-12 village places (69,9 sq. m)
13. 13.Multimedia class – 13 seats (39.7 sq. m)
14. 14.Computer class No. 415 – 10 village places (55.2 sq. m)
15. 15.Computer class No. 421 – 10 seats (55.5 sq. m)
16. 16.Computer class No. 430 – 9 village places (47.1 sq. m)

Practice bases:

№	Name organization (institution)	Contract No. and date
1.	Institute of Advanced Training of Teachers in Almaty region "Orleu"	№1, 04.02.2018
2.	QSTEM	№25, 23.11.2021

4. LONG-TERM PLAN FOR THE DEVELOPMENT OF THE EDUCATIONAL PROGRAM

№	Event content	Implementation period	Responsible persons
Uchebno-methodical direction			
1	Introduction of modern training technologies that promote the development of cognitive activity of undergraduates	2023-2025	Teaching staff of the department
2	Involvement of partners and employers in the development and expertise of educational programs	2023-2025	Program leader, teaching staff of the Department
3	Publication of educational, methodical and scientific literature on the implemented OP	2023-2025	Teaching staff of the department
4	Monitoring and updating catalogs of elective subjects in accordance with the development of key and professional competencies, labor market requirements	2023-2025	Program Leader
5	Attracting practitioners from organizations with a practical field of activity, including advanced training institutes, to conduct master classes for undergraduates on the use of innovative technologies in the educational process	2023-2025	Program Leader
6	Conclusion of contracts with foreign and foreign companies	2023-2025	Program Leader

	Russian partner universities to develop academic exchange of students at all levels and teaching staff		
Research area			
1	of to discuss methods and forms of research work of undergraduates	2023-2025	Program Leader
2	Preparation and publication of scientific articles, as well as participation in scientific conferences abroad	2023-2025	Teaching staff of the department
3	Publication of works in international publications indexed by Thomson Reuters and Scopu databases	2023-2025	Teaching staff of the department
4	Organization of joint scientific and practical exercises events with domestic and international partners	2023-2025	Program Leader, Teaching staff of the department
Educational direction			
1	Conducting seminars and trainings on motivation to lead a healthy lifestyle	2023-2025	Program Leader
2	Conducting seminars and trainings that motivate people to respect the cultural and scientific heritage of previous generations	2023-2025	Teaching staff of the department
Professional development			
1	Conducting trainings on the topic "Psychological and pedagogical support for professional development of a teacher"	2023-2025	Teaching staff of the department