«ТҰРАН-АСТАНА» УНИВЕРСИТЕТІ

МАГИСТРАТУРА/ МАГИСТРАТУРА/ MASTER PROGRAM

EDUCATIONAL PROGRAM
«7M06102 – Information systems»

күндізгі оқу нысаны/очная форма обучения/full-time study form
оқу мерзімі/срок обучения/term of study –2 years
түскен жылы 2023/прием 2023 года/admission 2023

АСТАНА, 2023

1 UNION. PASSPORT OF EDUCATIONAL PROGRAM
7M06101, 7M06102 – «INFORMATION SYSTEMS»

(Admission-2023 y.)

Developed on the basis of the State Compulsory Standard of Higher Education and Postgraduate Education dated July 20, 2022 No. 2 (as amended and supplemented), Rules for organizing the educational process on credit technology of education dated October 12, 2018 No. 563 (as amended and supplemented), Professional Standard " Information and Communication Technologies", approved by the order of the Acting Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" No. 222 dated 05.12.2022.

1. School: Business and information technologies

2. Name and code of the educational program: «7M06102 – Information systems»

3. A view of EP: the current

4.The learning curve:

1. Information systems in economics and science;

2. Information systems in management.

5.The purpose of the educational program:

For scientific and pedagogical direction. Training of specialists with skills, knowledge and skills in the field of IT-technologies, development of modern IT-models for the economy and effective management of human activity through scientific approaches.

6. The levels on the NQF: level 7

IQF level: 7

7. List of qualifications and positions:

Graduate master's degree EP «7M06102 – Information systems» is awarded the degree:

1. Master of Technical Sciences under the educational programme «7M06102–Information systems».

Masters of this profile are designed for economic, managerial, entrepreneurial, commercial and research work in organizations of different forms of ownership and in various fields of activity.

Qualifications and positions of graduates of EP «7M06102 - Information systems»:

Director (head) of computing (information and computing) center;

Head of the automated production control system (ACS) department (division or center of information technology);

Head of information department (scientific and technical information);

Engineer for automated production management systems (division or center of information technology);

Software engineer (programmer);

Programmer (web master, web designer);

Computing technician (information and computing) center;

Information security technician;

Software technician;

8 Qualification characteristics of the graduate:

8.1 Scope of professional activities

Masters of the educational program «7M06102- Information systems» can carry out:

In scientific and pedagogical direction:

-organizational and managerial;

-research;

-educational (pedagogical) activity of various directions in higher, secondary-special and vocational educational institutions;

-scientific activity in the information services of research institutions, public administration, educational institutions, design organizations, industrial enterprises.

And also the graduate of scientific and pedagogical magistracy can carry out activity to the

corresponding graduate of profile magistracy.

8.2 Objects of professional activity

The objects of professional activity of graduates are:

At the profile direction activity in computer services of public administration bodies, industrial enterprises, financial organizations, etc.;

At the scientific and pedagogical direction pedagogical activity in higher, secondary special, vocational educational institutions, scientific activity in information services of research institutions, public administration, educational institutions, design organizations, industrial enterprises.

8.3 Subject of professional activity

The subjects of professional activity of graduates are mathematical, information, software, linguistic, technical, organizational and legal support of information systems, including technology design, development, implementation, maintenance and operation.

8.4 Types of professional activity

Masters should be able to apply their theoretical knowledge in practice, receiving, analyzing, interpreting, generalizing, evaluating and presenting information about the activities of the organization.

Master of education program «7M06102 – Information systems» can perform the following professional activities:

8-software engineer (programmer);

-system engineer (network administrator);

-research fellow;

-teacher of universities and colleges.

9.Key competence

9.1.1 General core competencies:

- in the field of native and foreign languages:

Know: the technology of communication, a communication strategy **(KC1).**

Be able to: build a constructive dialogue, communication in a multicultural, multiethnic and multi-confessional society **(KC2).**

Possess skills: processing of a large volume of foreign language information in order to collect material for writing a master's thesis or its section in the studied language **(KC3).**

-in the field of fundamental mathematical, natural science and technical training:

Know: fundamental mathematical, natural science and technical disciplines that contribute to the formation of a highly educated person with a broad Outlook and a culture of thinking **(KC4).**

Be able to: formulate and solve problems, to analyze; to prove the results obtained; apply formulas, basic laws of natural-science disciplines in professional activity **(КC5).**

Possess skills: apply methods of analysis, synthesis to solve applied problems, apply methods of mathematical analysis and modeling, theoretical and experimental research **(KC6).**

- in the field of computer technology:

Know: basic concepts, principles, theories and facts related to computer science; basic information technology **(KC7).**

Be able to: apply and use information technology in professional activities **(KC8).**

Possess skills: programming using modern tools **(КC9).**

9.1.2 General education competences:

- in the field of social and cultural activities:

Know: ethical, spiritual and cultural values, basic laws and forms of regulation of social behavior, sociological approaches to the individual, traditions and culture of the peoples of Kazakhstan, trends in the development of society **(KC10).**

Be able to: adequately navigate in different social situations, to think creatively, to be tolerant to traditions, culture of other peoples of the world, to have an active life position **(KC11).**

- in the field of training activities:

Know: fundamental disciplines of the emerging science of psychology, including psychological management **(KC12).**

Be able to: use the system of categories and methods necessary to solve typical problems in various fields of professional practice, apply theoretical and experimental research, basic methods

of mathematical analysis and modeling for processing data obtained in solving various professional problems, conduct bibliographic and information retrieval work, followed by the use of data in solving professional problems and design of scientific articles, reports, conclusions**. (KC13).**

Possess skills: perception of the personality of another, empathy, establishment of trusting contact and dialogue, persuasion and support of people; finding organizational and managerial decisions in non-standard situations and readiness to take responsibility for them, effective consolidation of theoretical knowledge during the passage of educational and industrial practices, conscious choice of disciplines of specializations, analysis of their activities and the ability to apply methods of emotional and cognitive regulation (to optimize) their own activities and mental state **(KC14).**

- in the field of business and economic activities:

Know: theoretical bases of pedagogical management, stages of formation of management as independent science **(KC15).**

Be able to: identify methods of state regulation of the economy, apply the principles and rules governing business and economic relations in practice **(KC16).**

Possess skills: use the acquired knowledge on the subject in professional activity, analysis of legal and economic relations within the field of professional activity **(KC17).**

9.2.3 Professional (special) core competencies:

Know:

-on the professional competence of a higher school teacher **(KC18).**

-on current trends in the development of scientific knowledge **(KC19).**

Know:

-basic types and classification of information systems **(KC20).**

-flow of information processes **(КК21).**

-methods of search, processing and presentation of professionally significant information, forms and methods of pedagogical activity **(KC22).**

-psychology of cognitive activity of students in the learning process **(KC23).**

Be able to:

-psychological methods and means of improving the effectiveness and quality of training **(KC24).**

-develop and use software products to implement innovative projects **(KC25).**

-to bring the results of scientific research to practical use **(KC26).**

-to bring the results of scientific research to practical use **(KC27).**

Possess skills: expand and deepen the knowledge necessary for daily professional activities and continuing education in doctoral studies **(KC28).**

Be competent in matters:

-ensuring constant updating of knowledge, expansion of professional skills and abilities **(KC29).**

-formulation and solution of modern scientific and practical problems, planning and conducting research, teaching, management activities **(KC30).**

2. Learning outcome:

According to Dublin Descriptors formed the following learning outcomes on educational program «7M06102 - Information systems» (scientific and pedagogical direction):

Dublin descriptors	Learning outcome:
1. Demonstrate knowledge and understanding in the field of study, based on advanced knowledge of this field	1. know and understand modern achievements in the field of IT-technologies, the main types and classification of information systems and patterns of information processes
2. Apply knowledge and understanding at a professional level, formulate arguments and	2. know and understand methods of analysis, synthesis and evaluation of the effectiveness of the development, implementation and operation of the information system for the formulated innovation task

solve problems in the field of study	3. know and understand methods of object or process modeling, methods of search, processing and presentation of professionally significant information taking into account the relevance of the studied problem
3. To collect and interpret information for the formation of judgments, taking into account social, ethical and scientific considerations	4. have the ability skills of the deepened analysis of information and business processes, considering specifications of design of information systems; 5. have the ability to development and use of software products for implementation and management of it projects, models and technologies
4. Communicate information, ideas, problems and solutions to both professionals and non-specialists	6. have the ability to development and preparation of technical documentation, as well as bringing the results of scientific research to practical use
5. Learning skills necessary to independently continue further education in the field of study	7. have communication skills to to strive for self-development, self-realization, the use of creative potential, the ability to abstract thinking, have developed deduction and induction 8. have communication skills of professional communication and intercultural communication, public speaking, correct and logical design of their thoughts in oral and written form
6. Know the methods of scientific research and academic writing and apply them in the field of study	9. have the skills to independently analyze modern sources, draw conclusions, argue them and make decisions based on information
7. Apply knowledge and understanding of facts, phenomena, theories and complex relationships between them in the field of study	10. be competent in the methodology for the development and implementation of innovative projects 11. be competent in ways to ensure constant updating of knowledge, expansion of professional skills and abilities
8. Understand the importance of the principles and culture of academic integrity	12. strengthening the culture of academic integrity, the formation of zero tolerance for any violations of the norms of academic integrity on the part of teachers, staff and students of the university.

General information about the educational program is given in the form "Passport of the educational program" (Table 1).

Table 1 - Passport of the educational program

№	Field name	Note
1	Registration number	-
2	Education area code and classification	7M06 Information and communication technologies
3	Code and classification of training areas	7M061 Information and communication technologies
4	Group of educational programs	M094 Information technology
5	Name of educational program	Information systems
6	Look EP	Current EP
7	Arm of EP	**For scientific and pedagogical direction:** Training of specialists with skills, knowledge and skills in the field of IT-technologies, development of modern IT-models for the economy and effective management of human activity through scientific approaches.
7	Level by ISCE	0610
8	Level by NQF	7 level
9	Level by IQF	7 level
10	Distinctive features of EP	No
	The university partner (JEP)	-
	The university partner (DDEP)	-
11	List of competences	*Paragraph 2.1*
12	Learning outcome	
13	Form of training	Full time
14	Language of instruction	Russian\kazakh

15	Volume of credits	-Scientific and pedagogical direction-120 hours
16	Awarded degree	*-Scientific and pedagogical direction:* Master of Technical Sciences under the educational programme «7M06102- Information systems»
17	Availability of an Annex to the license for the direction of training	Annexes to the state license №0137367 from 29.12.2014 year (№011 from 15.03.2009 year)
18	Availability of accreditation of OP	Yes Certificate of specialized accreditation Registration number: SA-A №0161/3, 10.06.2019 y.
	The name of the accreditation body	IAQAE
	The period of validity of accreditation	10.06.2019 y.-07.06.2024 y.
19	Information about disciplines	*Paragraph 2.2*
20	Learning outcome	**Learning outcome:** Master of education program 7M06102 –«Information systems» (scientific and pedagogical direction) **must know and understand:** 1. know and understand modern achievements in the field of IT-technologies, the main types and classification of information systems and patterns of information processes 2. know and understand methods of analysis, synthesis and evaluation of the effectiveness of the development, implementation and operation of the information system for the formulated innovation task 3. know and understand methods of object or process modeling, methods of search, processing and presentation of professionally significant information taking into account the relevance of the studied problem Master **must have communication skills:** 4. have the ability skills of the deepened analysis of information and business processes, considering specifications of design of information systems; 5. have the ability to development and use of software products for implementation and management of it projects, models and technologies 6. have the ability to development and preparation of technical documentation, as well as bringing the results of scientific research to practical use 7. have communication skills to to strive for self-development, self-realization, the use of creative potential, the ability to abstract thinking, have developed deduction and induction 8. have communication skills of professional communication and intercultural communication, public speaking, correct and logical design of their thoughts in oral and written form Master **must be competent** 9. have the skills to independently analyze modern sources, draw conclusions, argue them and make decisions based on information 10. be competent in the methodology for the development and implementation of innovative projects 11. be competent in ways to ensure constant updating of knowledge, expansion of professional skills and abilities 12. strengthening the culture of academic integrity, the formation of zero tolerance for any violations of the norms of academic integrity on the part of teachers, staff and students of the university.