

MINISTRY OF SCIENCES AND HIGHER EDUCATION OF THE REPUBLIC OF  
KAZAKHSTAN  
Non -profit Limited Company M.Auezov South Kazakhstan University



Chairman of the Board-Rector  
D.Zh. Ahmed-Zaky  
2025.




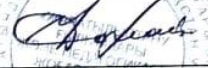

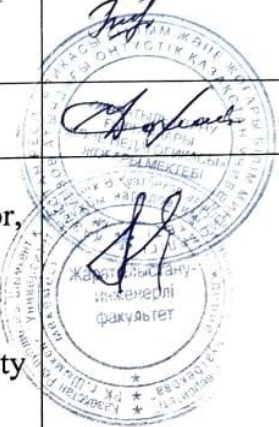




**EDUCATION PROGRAMME**

**7M01534 - "Mathematics and Computer Science"**

Registration number	7M01500272
Code and classification of the field of education	7M01 Pedagogical Sciences
Code and classification of training areas	7M015 Teacher training in natural science subjects
Group of educational programs	M010 Teacher training in mathematics
Type of EP	new
ISCE level	7
NQF level	2
SQF of education level	7
Language of learning	Kazakh, Russian
Typical duration of study	2 years
Form of study	Scientific and pedagogical
The complexity of the EP, not less	120 credits
Distinctive features of EP	-
University Partner ( JEP )	-
University Partner ( TDEP )	-
Social Partner ( DE )	-

Shymkent, 2025

**Drafters:**

Name	Position	Sign
Beisenova G. I.	c.p.s., Associate Professor, Department of "Computer Science"	
Zhaidakbayeva L.K.	c.p.s., Senior Lecturer Head. Department of " Informatics»	
Baidibekova A.O.	Associate Professor, Head of the Department of Mathematics	
Idirysbaev D.U.	Master, Senior Lecturer of "Computer Science"	
Amandikov M.A.	Candidate of Technical Sciences, Associate Professor, Head of the Department Computer Science and Mathematics Peoples' Friendship University named after Academician A.Kuatbekov	 
Suleimenova L.A.	Candidate of Technical Sciences, Associate Professor, Head of the Department of Computer Science, O.Zhanibekov South Kazakhstan Pedagogical University	 
Utegenov M.K.	Director, Higher College of New Technologies named after Manapa Utebayeva	 

The EP was considered at a meeting of the Academic Quality Committee of the Natural Sciences Pedagogy or the Higher School, Minutes # 6 « 17 » 03 2025 y.

Chairman of the Committee  A.Z. Tursynbayev

The EP was considered and recommended for approval at Educational-methodical meeting of M. Auezov SKU  
Minutes # 4 « 18 » 03 2025 y.

Chairman of the UMS  E.I. Imangalyev

The EP was approved by the decision of the Academic Council of the University  
Minutes # 10 « 27 » 03 2025 y.

	with changes and additions dated June 2, 2023. No. 252
<b>Conditions for the implementation of educational programs (EP) for persons with disabilities and special educational needs(SSN)</b>	<p>For students with SEN (special educational needs) and persons with disabilities (PSI), tactile PVC tiles, specially equipped toilets, a mnemonic diagram, and shower bars have been installed in educational buildings and student dormitories. Special parking spaces have been created. Crawler lift installed. There are desks for people with limited mobility (PLM), signs indicating the direction of movement, ramps. In the educational buildings (main building, building No. 8) there are 2 rooms with six working places adapted for users with disorders of the musculoskeletal system (DMS). For visually impaired users, the SARA™ CE Machine (2 pcs.) is available for scanning and reading books. The library website is adapted for the visually impaired. There is a special NVDA audio program with a service. The JIC website <a href="http://lib.ukgu.kz/">http://lib.ukgu.kz/</a> is open 24/7.</p> <p>An individual differentiated approach is provided for all types of classes and in the organization of the educational process.</p>

## 2 PASSPORT of the educational program

<b>Purpose of the EP</b>	<p>Training of competitive, competent masters of pedagogical Sciences of pedagogical direction, who are able to use in their professional activities the knowledge, skills and abilities obtained in the educational process in mathematics and computer science to solve pedagogical problems at all levels of education through information and communication technologies.</p>
<b>Tasks of the EP</b>	<ul style="list-style-type: none"> <li>- to provide conditions for the development of a high intellectual level of development, the acquisition of logical and critical thinking skills of scientific and organizational work in scientific and pedagogical activities;</li> <li>- Establishing conditions for the development of in-demand knowledge and skills, as well as a conscious attitude towards enhancing the welfare of society and conserving the planet within the framework of the SDGs</li> <li>- development of the ability to use system theoretical and practical knowledge on the methodology of teaching mathematics and computer science in professional activities in solving scientific, managerial and educational tasks and making operational decisions in problem situations;</li> <li>- development of self-service skills to ensure the possibility of rapid employment in the specialty or continuing education in the doctoral program and ensure continuous professional development of professional activities;</li> <li>- formation of graduates ' competitiveness in the field of education, training of highly qualified and consistently popular undergraduates in scientific and pedagogical areas for the domestic and international labor market.</li> </ul>
<b>Harmonization of EP</b>	<ul style="list-style-type: none"> <li>• 7th level of the National Qualifications Framework of the Republic of Kazakhstan;</li> <li>• Dublin descriptors of the 7th level of qualification;</li> <li>• 2 cycle of a Framework for Qualification of the European Higher Education Area);</li> <li>• 7 th Level of European Qualification Framework for Life long Learning).</li> </ul>

<b>Types of professional activity</b>	<ul style="list-style-type: none"> <li>- education;</li> <li>- training;</li> <li>- upbringing;</li> <li>- management;</li> <li>- research;</li> </ul>
<b>Learning outcomes</b>	<p><b>LO1</b> Effectively use a foreign language in interpersonal communication, in professional activity, in writing scientific articles; the use of modern information and digital technologies for research, for work in the educational field.</p> <p><b>LO2</b> To analyze the main ideological and methodological problems, including interdisciplinary ones, arising in science at the present stage of its development, to evaluate various facts and phenomena based on the provisions and categories of the philosophy of science.</p> <p><b>LO3</b> Evaluate the development and effective use of personnel in the organization, possess socio-psychological technologies for managing mass behavior.</p> <p><b>LO4</b> To develop educational and methodological complexes of disciplines taking into account the integration of education, science and innovation.</p> <p><b>LO5</b> To carry out the educational process based on the principle of student-centered learning using practice-oriented teaching methods and technologies.</p> <p><b>LO6</b> To develop the content of educational robotics courses, technologies for different levels of education, demonstrating the skills of designing and programming robots, developing mobile applications.</p> <p><b>LO7</b> To model problems of applied mathematics using computer mathematical programs.</p> <p><b>LO8</b> To develop electronic educational publications and design using information technologies, Internet resources, and telecommunication means.</p> <p><b>LO9</b> To participate in research work using the methodology of scientific research and obtain new scientific, applied results as part of an independent and scientific team.</p>

### 3. Competencies of an EP graduate

<b>GENERAL COMPETENCIES (SOFTSKILLS). Behavioral skills and personal qualities</b>	
GC 1. Competence in managing one's literacy	SS1.1. Strive for professional and personal growth throughout life. SS 1.2. Constantly update own knowledge within the chosen trajectory and in an interdisciplinary environment, carry out further learning with a high degree of independence and self-regulation. SS 1.3. To be capable of reflection, an objective assessment of one's achievements, an awareness of the need to form new competencies and continue education in doctoral studies.
GC 2. Language competence	SS2.1. The ability of possessing a sufficient level of communication in the professional field in the state, Russian and foreign languages for negotiating and business correspondence. SS 2.2. The ability of mastering the skills of mediation and intercultural understanding.
GC 3. Mathematical Competence and Competence in the field	SS3.1. The ability to interpret the methods of mathematical analysis and modeling for solving applied problems in the field of study. SS3.2. The ability to plan the setting of scientific experiments,