

## CHARACTERISTIC OF THE EDUCATIONAL PROGRAM

**The purpose of the educational program:** preparation of Doctors of Philosophy (PhD) with analytical, research and teaching abilities, who are able to apply theoretical knowledge of mathematical science in practice.

### 1.1 GENERAL INFORMATION

<b>Type of educational program</b>	current
<b>Name of the educational program</b>	8D01505 "Mathematics"
<b>Field of education</b>	8D01 Pedagogical Sciences
<b>Training direction</b>	8D015 Training of teachers in natural science subjects
<b>The group of the educational program</b>	D010-Training of teachers of mathematics
<b>License to engage in educational activities</b>	The educational program is implemented on the basis of the appendix to License №KZ04LAA00017104 dated September 27, 2019 in the field of personnel training 8D01502 - Informatics, State Institution "Committee for Control in the Field of Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan".
<b>UNT Subjects</b>	Doctor of Philosophy (PhD) in the educational program 8D01505 "Mathematics"
<b>Educational level by NQF</b>	Doctoral degree, level 8
<b>Accreditation</b>	24.05.2019 г.-23.05.2024 г. HY «HAAP»
<b>The total amount of academic credits</b>	180
<b>Study duration</b>	3 years

### 1.2 VISION, MISSION, PROGRAM GOAL, VALUES, UNIVERSITY GRADUATE ATTRIBUTES

**Vision:** To be an innovative scientific and educational center

**Mission:** Contribute to the formation of human capital based on the best world practices

**Program goal:** Training of intellectual leaders who broadcast innovative ideas

**Values:**

Integrity,  
Professionalism,  
Social responsibility,  
Academic freedom,  
Global Citizenship,  
Openness.

**University graduate attributes:**

- 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. THE RATIONALE BEHIND THE EDUCATION PROGRAM

The educational program 8D01505 Mathematics was developed in this direction taking into account the modern domestic and international experience of training, author's and collective scientific achievements, and educational and methodological complexes in the field of specialization, the requirements of employers and the needs of the labor market.

#### 1.4. DISTINCTIVE FEATURES OF THE EDUCATIONAL PROGRAM

Academic mobility	Lomonosov Moscow State University, Harvard University
Double-degree program	Partner University
Additional education (Minor)	In the age of new knowledge, only a qualified teacher with deep theoretical knowledge and armed with new technologies can contribute to the future of the country. Therefore, the emergence of competition in the economy and production has led to increased and more complex requirements for the professional training of specialists. Places of higher education institutions occupy a special place in the education and training of a competitive personality.

#### **Coincidence with similar EP of leading universities in the near and far abroad**

The correspondence of the content of the OP with Moscow State University named after M.V. Lomonosov (21st place among the top 100 universities in the world) as a percentage was 42%, with Harvard University (2nd place among the top 100 universities in the world) as a percentage was 31%.

#### 1.5. GRADUATE CAREER OPPORTUNITIES

Graduates of the specialty 8D01505 Mathematics can work in general education institutions, educational institutions and research centers, in the field of science.

Educational organizations with state and non-state funding, schools, lyceums, gymnasiums, colleges, organizations of technical and vocational education; scientific organizations; research centers in the field of science, mathematics, pedagogy, psychology and teaching methods, management organizations; public administration organizations, education departments, organizations of various forms of ownership, which use methods of mathematical research in his work.

#### 1.6. AREAS OF PROFESSIONAL COMPETENCE

Value-oriented, unique educational process as a whole, content, methods and results, research, innovation, information and analytical activities in the field of mathematics, pedagogy, psychology and teaching methods, the technological process of design, implementation of methods of mathematical research.

Doctoral students of education under the educational program "8D015 Teacher training in natural science subjects" can perform the following types of professional activities:

- educational (pedagogical);
- educational and educational;
- educational and technological;
- socio-pedagogical;
- experimental research;
- organizational and managerial;
- information and communication.

#### 1.7. EDUCATIONAL PROGRAM LEARNING OUTCOMES:

**RO1** To master the achievements of world science and promote the results obtained in the course of research, he is able to use the database and materials of the international system.

**PO2** In a multilingual environment, demonstrates the skills of public speaking and discussions on mathematical education

**RO3** He has fundamental, high quality, professional knowledge and deep specialized skills in the field of mathematical education, which allow him to successfully develop science.

**PO4** The formed knowledge and research abilities in the field of mathematical education can develop independently in the conditions of modern changes.

**RO5** Modern scientific and practical problems in the field of mathematical education, organization of theoretical and experimental scientific research in a special field.

**RO6** Plans his further professional development and demonstrates basic mathematical disciplines at a high level of complexity.

**RO7** With his unique research, he is able to contribute to the expansion of the boundaries of knowledge in the field of mathematics through scientific and methodological problems at the national level, taking into account global trends and strategies for the development of higher education.

### **Matrix for comparing the results of training on the OP with the attributes of the graduate**

	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8	LO 9	LO 10	LO 11	V 12
GA1												
GA 2												
GA 3												
GA 4												
GA 5												
GA 6												

## **1.8. REFERENCES**

### **The educational program is developed based on the following legal acts:**

1) Professional standard "Teacher" approved by the Order 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) ORC of the sphere of education, 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