



*Master's Degree program "Applied
Mathematics and Computer Science in
the socio-economic Sphere
and Education"*

International educational program:
✓ Amanzholov University (Kazakhstan)
✓ DTPI (Uzbekistan)

**APPLIED MATHEMATICS
AND COMPUTER SCIENCE
01.04.02**

**ALTAI STATE
UNIVERSITY**

BARNAUL, Altai Krai, Russia

Head of the Master's Degree Program:

Zhuravleva Vera Vladimirovna

PhD, Associate Professor of the Department of Theoretical Cybernetics and Applied
Mathematics, Institute of Mathematics and Information Technology, AltSU





01.04.02 – APPLIED MATHEMATICS AND COMPUTER SCIENCE

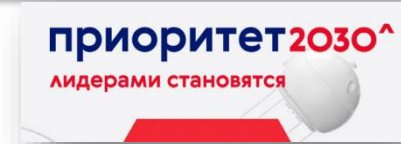
Master's Degree program "Applied Mathematics and Computer Science
in the socio-economic Sphere and Education"



PROFESSIONAL STANDARDS:

06.042 «Big Data Specialist»;

01.003 «Teacher of additional education for children and adults»



2022 year -
32 students,
of these, 12 are
foreign



2023 year -
34 students,
of these, 21 are
foreign



2024 year -
35 students



Partner universities:

- **Amanzholov East Kazakhstan University (Ust-Kamenogorsk, Kazakhstan)**
- **Denau Institute of Entrepreneurship and Pedagogy (Denau, Uzbekistan)**



Employment in the IT-field, or in the field of additional education



The opportunity to participate in scientific and applied projects of the department and partner organizations

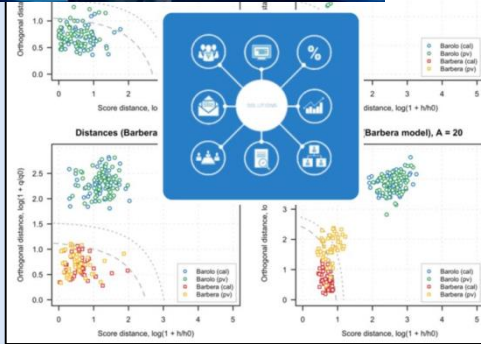
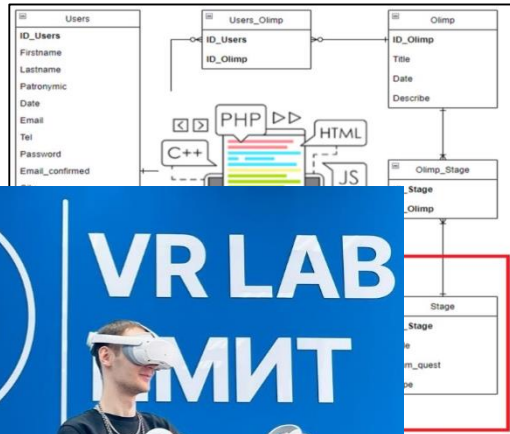


Scholarships and financial support for applicants to budget places

Head of the Master's Degree Program: Zhuravleva Vera Vladimirovna, PhD



TYPES OF GRADUATE ACTIVITIES



- Development and management of analytical projects for big data research;
- Development and application of artificial intelligence algorithms and methods;
- The use of special technologies (ML, VR/AR, cloud) in the tasks of applied data analysis;
- Development of mathematical models and information technologies for solving planning and forecasting problems in social and economic systems;
- Project work in the field of management of socio-economic systems;
- Development of software and methodological support for an additional general education program in computer science, programming and applied mathematics



You will study in the 1st year ...



1 semester

1. Communication and activity module:

- ✌ Foreign language
- ✍ Methodology of scientific research
- 👉 Team building and leadership skills

2. General professional module:

- 💻 Machine learning methods

3. Profile module:

- 🕒 Time series analysis
- 💰 Python for scientific research and modeling of complex systems
- 🌐 Geoinformatics and distributed databases

For graduates of the specialty and international students, it is possible to transfer "Foreign language", "Intercultural interaction in the modern world"

2 semester

1. Communication and activity module:

- 📖 Intercultural interaction in the modern world

2. General professional module:

- 📊 Big Data Statistics

3. Profile module:

- 🏗 Design and project management in professional activities
- 🌐 Multi-user information systems
- 😊 Simulation modeling
- ✈ Processing data from UAVs
- ☁ Cloud technologies

4. EDUCATIONAL PRACTICE: Technological (design and technological) practice



You will study in the 2nd year ...



3 semester

1. General professional module:

- 👁 Pattern recognition

2. Profile module:

- 🌀 Neural networks. Deep learning
- 🕶 Virtual and augmented reality technologies

3. The module of pedagogical technologies:

- ☑ Methods of teaching IT disciplines
- ▶▶ Innovative technologies in the educational process

4 semester

1. Profile module:

- ☑ Olympiad programming

2. TECHNOLOGICAL PRACTICE: pedagogical practice

3. TECHNOLOGICAL PRACTICE: design and technological practice

4. PRE-GRADUATE PRACTICE

5. DEFENSE OF THE MASTER'S THESIS

THE TRAINING FORMAT IS FULL-TIME!

EDUCATION IN RUSSIAN!



OUR INDUSTRIAL PARTNERS



Комитет
по образованию
города Барнаула



- YANDEX
- SBER
- POSTGRES PROFESSIONAL
- Barnaul Education Committee
- Altai Institute of Digital Technologies and Educational Quality Assessment named after O.R. Lvov



PostgreSQL

Яндекс

