

# Mathematical and Software Support of Computers, Complexes and Computer Networks

Far Eastern Federal University

Degree or qualification is awarded: **Candidate of Sciences**

Language of study: **Russian**

Mode of study: **full-time, part-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **320 000 rub per year (full-time) / 160 000 rub per year (part-time)**

Programme webpage at the university website:

<https://www.dvfu.ru/upload/medialibrary/a06/%D0%9F%D0%B5%D1%80%D0%B5%D1%87%D0%B5%D0%BD%D1%8C%20%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%20%D0%B0%D1%81%D0%BF%D0%B8%D1%80%D0%B0%D0%BD%D1%82%D1%83%D1%80%D1%8B,%20%D0%BE%D0%B1%D1%8A%D1%8F%D0%B2%D0%BB%D0%B5%D0%BD%D0%BD%D1%8B%D1%85%20%D0%B2%20%D0%BD%D0%B0%D0%B1%D0%BE%D1%80%202020%20%D0%B3%D0%BE%D0%B4%D0%B0.pdf>

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The purpose of the educational program is to acquire the level of competencies necessary for the implementation of professional activities and preparation for the defense of a scientific and qualifying work (dissertation) for the degree of candidate of sciences.

The objectives of the educational program are:

- training of professionally competent and in-demand researchers and research teachers with universal, general professional and professional competencies that contribute to their social stability and sustainability in the national and international labor markets;
- training researchers and research teachers capable of critical analysis and assessment of modern scientific achievements, generating new ideas in solving research and practical problems, including in interdisciplinary areas, capable of designing and carrying out complex research, including interdisciplinary, possessing the methodology of theoretical and experimental research in the field of professional activity and culture of performing scientific research;
- training researchers and teachers-researchers who are able to participate in the work of Russian and international research teams in solving scientific and scientific and educational problems, capable of using modern methods and technologies of scientific communication in the state and foreign languages;
- training researchers and teachers-researchers capable of developing new research methods and their application in independent research activities, who are able to organize the work of a research team in the field of professional activities, capable of objectively assessing the results of research and development, including those carried out by other specialists and in other scientific institutions;
- training researchers and teachers-researchers capable of presenting the results of research activities at a high level and taking into account the observance of copyright, possessing the methods of conducting patent research, licensing and copyright protection when creating innovative products in the field of professional activity;
- training of teachers-researchers capable of teaching in the main educational programs of higher education.

The area of professional activity of graduates who have mastered the postgraduate program includes the spheres of science, technology and pedagogy, covering the totality of the tasks of the direction "Informatics and Computer Engineering", including the development of theory, creation, implementation and operation of promising computer systems, networks and complexes, mathematical and software.

Graduates who have mastered the postgraduate program in the direction 09.06.01 Informatics and computer technology are preparing for the following types of professional activity:

- research activities in the field of the functioning of computers, complexes, computer networks, the creation of elements and devices of computer technology based on new physical and technical principles, methods of processing and accumulating information, algorithms, programs, programming languages and human-machine interfaces, the development of new mathematical methods and means of support for intelligent data processing, development of information and computer-aided design and control systems in application to various fields;
- teaching activity in educational programs of higher education.

The relevance of the postgraduate program "Mathematical and software support for computers, complexes and computer networks" is determined by the emergence of new computer architectures that allow creating new more efficient methods of processing and accumulating information, new methods and means of intelligent data processing, instrumental and applied software systems of various classes for automation professional activity in various subject areas and for solving various new classes of problems.

The demand for graduate students who have mastered the educational program "Mathematical and software support for computers, complexes and computer systems" is determined by the great need for specialists with developed competencies of developers of software systems for various purposes, capable of creating and researching methods for solving applied problems, programming languages, human-machine interfaces, instrumental and applied software systems designed to support the process of solving applied problems in various subject areas.

### **Specializations within this programme**