

# Biochemistry, Molecular Biology and Bioinformatics

Kazan (Volga Region) Federal University

Degree or qualification is awarded: **Master**

Language of study: **Russian**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **no**

Price: **229 620-282 000 RUB per year**

Programme webpage at the university website:

<https://kpfu.ru/eng/academic-units/natural-sciences/institute-of-fundamental-medicine-and-biology>

Programme curator: **Rauf Sabirov**

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## **Professional Fields:**

- Fundamental and applied research;
- Expertise and management activities at organizations specializing on Biochemistry and Molecular Biology;
- Environmental protection and natural resources management organizations;
- Teaching activity in secondary education and higher education institutions;

## **Knowledge and skills to acquire:**

- Contemporary methods of molecular biology;
- Methods of genetic engineering;
- Cellular and omics technologies;
- Methods of molecular-genetic analysis;
- Methods of medical biochemistry and structural biology;
- Fundamental knowledge in immunology;
- Biochemistry of control and cell regulation in normal and pathological conditions.

## **Graduates' career opportunities:**

- carrying out research in the framework of postgraduate study programs;
- working at:
  - educational institutions;
  - scientific and research institutes;
  - forensic expert services organizations;
  - biochemical and analytical laboratories of production entities;

- research centers.

Head of the Program: Professor Ramziya Kiyamova

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## **In the field of Bioinformatics**

Professional Fields:

Bioinformatics integrates mathematical and computational approaches and methods, as well as advanced computer technologies with contemporary molecular-biological approaches, genomic and proteomic technologies. This circumstance provides for a wide range of career paths in:

- research organizations, institutes specialized on Biology, Medicine, Pharmacology;
- public and private pharmaceutical and biotechnological companies;
- production laboratories (forensic, food control);
- institutions of higher, vocational and secondary general education.

Academic peculiarities of the program:

The teaching activities in the framework of the Master in Bioinformatics is carried out by the leading scholars in various fields such as genomics (Mikhail Gelfand, Institute for information transmission problems of the Russian Academy of Sciences), structural biology (Marat Yusupov, Institute of genetics, molecular and cellular biology, Strasbourg, France), system biology (Ilya Serebriiskii, Fox Chase Cancer Center), as well as lecturers from other KFU Institutes (Institute of Chemistry, Institute of Physics and Institute of Computational Mathematics and Information Technologies). Distant educational and interactive technologies are actively implemented in the course of this program.

Graduates' career opportunities:

- carrying out research in the framework of postgraduate study programs;
- working at:
- scientific and research institutes;
- research centers;

Head of the research area: Associate professor Natalia Akberova

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## **Specializations within this programme**