Bioinformatics

Moscow Institute of Physics and Technology (National Research University)

Degree or qualification is awarded: **MIPT Master's Diploma**

Language of study: **English**
Mode of study: **full-time**
Duration: **2 years**
Availability of free education: **yes**
Price: **350 000 RUB**

Programme curator: **Denis Ustyuzhaninov**
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Description of the program:

Bioinformatics is a promising programme for future employment both in science and in many commercial organisations.

Currently, research into various biological entities actively employs existing knowledge in computer science, algorithms and computer modelling. Given the exponential growth of such data, there is urgent demand for highly qualified specialists in this field. Accordingly, students enrolled in the Bioinformatics Master's Programme will be offered such disciplines as "Introduction to Molecular Biology and Genetics", "Fundamentals of Bioinformatics", and "Machine Learning and Big Data in Biomedicine".

Students will learn to process and analyse large amounts of information on biological objects, both that are currently available and will become available in the near future, given the trend towards exponential growth of this data (decoding of genomic data, spatial structures of biomolecules, interactions of biological objects).

They will also study how molecular diagnostic techniques are developed and how new targets are selected for drugs. The course will include lectures by distinguished Russian and foreign professors working at the Russian Academy of Sciences and Sechenov University, Martin Luther Universität Halle-Wittenberg and Georgia Tech, and Phillips. A key partner of the programme is BostonGene.

In addition, to ensure a level field in knowledge, individual courses will be developed on the Coursera and Stepik platforms for students who are not fully proficient in any subject at the beginning of the Master's programme.

More information about the programme can be found on its website: https://bioinformatics.mipt.ru/.

Who teaches:

Alexander Rubanovich: Head of the Genetic Security Unit at the N.I. Vavilov Institute of General Genetics (IOGEN) of the Russian Academy of Sciences (RAS): Head of the Laboratory of Ecological Genetics

Julia Medvedeva: Head of the Bioinformatics Laboratory of Cell Technology, CSc Biology.

Vsevolod Makeev: Head of Computational Biology Department, N.I. Vavilov Institute of General Genetics, Russian Academy of Sciences. N.I. Vavilov RAS

What students receive at the end of their studies:

MIPT Master's Diploma

When to apply: By August 1, 2021.

What exams do you need to take:

A written exam in biotechnology (https://pk.mipt.ru/master/2020_exams/ФБМФ%20Биотехнология.pdf), an oral interview

What documents do you need to present:

- Passport

- Notarised translation of your passport into Russian

- Bachelor's Degree Diploma and academic grades supplement

- Legalised translation of Bachelor's Degree Diploma and academic grades supplement

- Curriculum vitae (if any, list achievements and publications)

- Motivation letter

Questions about the programme's content should be addressed to the program officers listed on the website (https://bioinformatics.mipt.ru/) and to Anna Golenkova (golenkova.mipt@gmail.com, +7(925)049-94-34).

Specializations within this programme