

# Biophysics

National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)

Degree or qualification is awarded: **Bachelor degree**

Language of study: **Russian**

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

Duration: **4 years**

Availability of free education: **yes**

Price: **167 700 rubles per semester**

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**The purpose of the program:** Program “Biophysics” is aimed to prepare specialists with fundamental knowledge in physics and mathematics, integrated with biology, chemistry, genetic engineering and bioinformatics. This program enables graduates to work successfully in the areas related to research and engineering development of a wide range of life sciences: new biotechnology in medicine, food industry, ecology, agrotechnology, biocosmic research, printing of the living organisms.

**Students study such disciplines as** radiation biophysics, theoretical biophysics and complex process modeling, biophysics of photobiological processes, physical chemistry of polymers and biopolymers, molecular biology, bioenergy of a cell and others.

**Research practice of students** is held at National Research Nuclear University MEPhI, Institute of bioorganic chemistry RAS, Institute for Biochemical Physics of RAS, N.N. Blokhin Russian Cancer Research Center

## **Area of professional activity:**

Biophysics and Biochemistry

Physical chemistry of polymers and biopolymers

Molecular biology of the cell

Bioinformatics

Radiation ecology and biophysics

Medical biophysics

Genetics and epigenetics, genomics

Mathematical modeling in biophysics, biology, oncology

## **The main research areas:**

Physics of the processes in biological and molecular chemical systems

Development of the protection and rehabilitation systems for the materials and organisms from industrial pollution

Physicochemical principles of the regulation of living systems

Patterns of aging at the micro and macro levels

New medications and methods of effective theranostics of socially significant diseases

Biophysics, genetics and epigenetics of diseases

**Practice and employment:**

Institute of bioorganic chemistry RAS

Institute for Biochemical Physics of RAS

Federal research and clinical center of physical-chemical medicine

N.N. Blokhin Russian Cancer

National Medical Research Center of Radiology

National Research Center «Kurchatov Institute»

Burnasyan Federal Medical Biophysical Center

ROSATOM

**Specializations within this programme**