

03.03.02 Physics

Biophysics

Department: "Medical Physics"

Program objective

prepare specialists with fundamental knowledge in physics and mathematics, integrated with biology, chemistry, genetic engineering and bioinformatics, medicine, food industry, ecology, agrotechnology, biocosmic research

Curriculum features

- Biophysics, biochemistry and medical biophysics
- Physical chemistry of polymers and biopolymers
- Molecular biology of the cell
- Bioinformatics
- Radiation ecology
- Mathematical modeling in biophysics, biology, oncology

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

Practical training and future employment opportunities

- Institute of Bioorganic Chemistry of the Russian Academy of Sciences
- Institute for Biochemical Physics of the Russian Academy of Sciences
- Federal Research and Clinical Center of Physical-chemical Medicine
- Blokhin National Cancer Research Center of Oncology
- National Medical Research Center for Radiology
- National Research Center "Kurchatov Institute"
- Burnasyan Federal Medical Biophysical Center
- State Atomic Energy Corporation ROSATOM companies