

03.04.01 Applied Mathematics and Physics

Challenges of Theoretical Physics and Mathematical Modeling

Program objective:

training highly qualified theoretical physicists capable of conducting fundamental and applied research including the search for new laws of nature; modeling of complex physical, technical and engineering systems; suggesting and boosting new research directions in applied physics and technologies.

Program graduates always possess skills and research capabilities sufficient for productive and creative work in any area of modern physics.

Areas of research and experts training:

- Physics of ultrahigh laser fields
- Particle physics
- Astrophysics and cosmology
- Nuclear physics
- Quantum informatics and quantum computers
- Laser, plasma and condensed matter physics
- Physics of extreme states of matter and high energy density physics.

Practical training and employment opportunities

- MEPhI Theoretical Nuclear Physics Department
- research centers of “Rosatom” and the Russian Academy of Sciences
- Russian Federal Nuclear Centers
- National Research Center “Kurchatov Institute”
- Dukhov Research Institute for Automatics
- Joint Institute for Nuclear Research in Dubna.