

03.04.01 Applied Mathematics and Physics

Supercomputer Technologies in Engineering and Physical Modeling

Program objective:

to train highly qualified specialists to conduct fundamental and applied research, and to develop and use engineering and physical analysis tools to implement the concept of a digital twin.

Competitive advantage

fundamental physical, mathematical and supercomputer training through the combination of general and specialized disciplines, as well as study of basic theoretical research and mathematical modeling methods.

Curriculum features

- theoretical and mathematical physics and mathematical modeling using high performance computing (HPC) applications, i.e. digital twins for solving urgent computationally complex problems.
- architecture of supercomputer systems
- computer graphics
- scientific visualization
- parallel programming technologies
- academic, research, production practical training (MEPhI Center for Engineering Physics and Supercomputer Modeling)

Career opportunities

top Russian and international technology companies and research centers connected with mechanical engineering, aviation, aerospace industry, shipbuilding and automotive industry, nuclear and laser technologies