**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