

Pulse Electronics and Electrophysics

National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)

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

Language of study: **Russian**

Mode of study: **full-time**

Duration: **5,5 years**

Availability of free education: **yes**

Price: **91 000 - 120 800 rubles per semester**

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The goal of the program is the training of highly qualified specialists for research, design, technological and administration work in following fields:

- research and development of new principles of electrophysical device operation, creation of methods and facilities for their designing and manufacture;
- research and development of new types of pulsed electronic and electrophysical systems, including accelerators of macrobodies; high current pulsed accelerators; high-power pulsed current, voltage and microwave radiation generators;
- development of control systems, data collection and processing systems on the basis of modern microprocessors, programmable logical chips, analog devices, optoelectronic and nanoelectronic devices;
- investigation of properties of electrophysical sensors and execution units, organization of their operation in controlling and measuring systems;
- creation of methods for pulsed electronic and electrophysical system design, development of theoretical models for physical process simulation in high-power pulsed electronic and electrophysical systems;
- design of new perspective structures of modern electrophysical and high current electronic facilities operating under power pulsed energy-release;
- development of new technologies on the basis of pulsed electronic and electrophysical systems for different fields of science and engineering.

Targeted programs for which training is performed

"Personal Training for Science Centers," "A New Generation of Nuclear Energy Technologies for the Period of 2010-2020," "Program of Innovative Development of the Rosatom State Corporation," and "National Technological Base."

Basic department

Electrical Engineering (# 8)

The base of industrial and/or scientific practice and employment

Dukhov All-Russia Research Institute of Automatics, Lebedev Physical Institute of the Russian Academy of Sciences, National Research Centre "Kurchatov Institute," Joint Institute for High Temperatures of the Russian Academy of Sciences, Troitsk Institute for Innovation and Fusion Research Russian Federal Nuclear Center – All-Russia Research Institute of Experimental Physics.

The program of continuous training: Specialist's Degree - Post Graduate

Specializations within this programme

Sphere of professional activity of future graduates

Work at scientific-research and design organizations of atomic, aerospace, radio-electronic, and defense industries and adjacent branches as specialists, researchers and developers, as well as specialists effecting organizational and managerial activities in the field of development of new types of electrophysical devices and electronic systems for different purposes.