

Abstract of the educational program of the magistracy

“Nanoelectronics, Spintronics and Photonics”

Direction code: 11.04.04 Electronics and nanoelectronics

Required duration: 2 years

Program mode: Full-time

Eligibility requirements: Bachelor

Qualification awarded upon graduation: Master

Graduating Institution: Institute of nanotechnologies in nanoelectronics, spintronics and photonics (NESPI), Department of condensed matter physics

Program Description: This program is aimed at masters planning to develop in such fields of activity as modeling, designing, production technologies of both materials and component base.

Field of professional activity:

- Methods of theoretical and experimental research, mathematical modeling, design, technology of micro- and nanoelectronics devices for various functional purposes;
- The use of CAD systems, engineering analysis software systems, digital prototype development technologies based on digital three-dimensional product models that allow you to simulate any object characteristics in any operating conditions;
- Creation of promising and special materials for micro- and nanoelectronics, nanophotonics, organic electronics for their use in the development of devices.

Career opportunities: The most popular options for the further work of our graduates is the position of a process engineer, structural engineer or research associate both in research centers in Russia and the world, and in factories of mass production of electronic components. Due to the fact that during the training, graduates will gain skills in working with installations and devices of vacuum, plasma, solid state, microwave, optical, micro- and nanoelectronics for various functional purposes, they have a large selection of employers. Some of the graduates have the opportunity to engage in project management in high technology sectors and the organization of work of scientific, design and production units involved in the development and design of new equipment and technologies, the introduction and application of new technologies.