

Nanotechnology in Electronics

Far Eastern Federal University

Degree or qualification is awarded: **Bachelor**

Language of study: **Russian**

Mode of study: **full-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **210 000 rubles per year**

Programme webpage at the university website:

https://www.dvfu.ru/upload/medialibrary/013/pp3nvlwe0vn1g3us7zg6peb4g4kgsu0/%D0%9F%D0%B0%D1%81%D0%BF%D0%BE%D1%80%D1%82%20%D0%9E%D0%9F%2011.03.04_%D0%AD%D0%BB%D0%B5%D0%BA%D1%82%D1%80%D0%BE%D0%BD%D0%B8%D0%BA%D0%B0%20%D0%B8%20%D0%BD%D0%B0%D0%BD%D0%BE%D1%8D%D0%BB%D0%B5%D0%BA%D1%82%D1%80%D0%BE%D0%BD%D0%B8%D0%BA%D0%B0_2022.pdf

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Bachelor's education in the educational program "Electronics and Nanoelectronics" is based on a combination of a block of humanities and fundamental training in mathematics, general, theoretical, computational physics, special disciplines with their gradual inclusion in real research work. Graduates of the program acquire the necessary (primary) skills of researchers and gain in-depth knowledge in the field of natural sciences.

Relevance for bachelors in the direction of 11.03.04 "Electronics and Nanoelectronics" is determined by the rapid development of microelectronics and nanoelectronics, especially in terms of nanotechnology, covering the field of design and creation of nanomaterials, semiconductor heterostructures and super grids, nano heterostructures, multi-layer magnetic materials, nanocomposites and nanosystems of inorganic nature. The development and operation of microelectronic, nano-electronic systems should be carried out by specialists with knowledge and skills in the field of condensed matter physics, electronics, magneto-electronics, spintronics, nano-measuring and computer technology and technology, software. This combination requires a deep and thorough study of both physical and natural science and engineering disciplines, provided by the educational program "Electronics and Nanoelectronics".

Key disciplines of the program:

Condensed matter physics, materials of electronic engineering, circuit engineering, physics of semiconductors and low-dimensional systems, physics of magnetic phenomena, nanoelectronics, processes of obtaining nanoparticles and nanomaterials, physico-chemistry of nanoclusters and nanostructures, probe nanotechnology in electronics. Fundamentals of nanolithography, synthesis and properties of nanostructured materials, processes at the interface, physics and technology of quantum devices.

Partners and experts involved in the implementation of the program:

Institutes of the Far Eastern Branch of the RAS, Vladivostok; Institute of Automation and Control Processes, Institute of Chemistry, Pacific Oceanological Institute National Research Center "Kurchatov Institute", Moscow.

Specializations within this programme