

Nanotechnologies and Microelectronics (Master)

Saint Petersburg Electrotechnical University "LETI"

Degree or qualification is awarded: **Master**

Language of study: **Russian**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **208 000 rubles per year**

Programme webpage at the university website:

<https://etu.ru/en/study/masters-degree/nanotechnologies-and-microelectronics>

Programme curator: **Maria Titarenko**

Tel.: **+7 812 234-35-53**

E-mail: mytitarenko@etu.ru

The program is aimed at training highly qualified specialists in the development, design, production and operation of nano- and micro- systems, including various types of micro- and nanosensors, microelectromechanical systems (MEMS) and microanalytic devices, microradio controlled components and microrobots for miniature technical devices, biomedical devices, special security systems. Master's programs

Within the framework of the direction 28.04.01 – Nanotechnologies and Microelectronics the following programs are presented:

- Nano- and Microelectronics (Department of Microelectronics)
- Nanotechnologies and Diagnostics (Department of Microelectronics)

Key points

- The program is focused on mastering the methods and means to computer aided design, micro- and nanoelectronic systems, producing and developing technology and understanding the principles of energy transmutation in nano- and microsystems;
- The “Nanotechnology and diagnostics” program gives students the skills of experimental research in physics and nano- and microsystem technology, teaches them to plan and conduct experiments and to analyze the results;
- The program focuses on observing physico-chemical processes, events, effects of the particle size, which occur in nanomaterials or nanosystems. The program also focuses on how to produce nanosystems to create a brand new nanoelectronic and nanobiotech devices with very different characteristics and working criteria;
- The students master the use of patterns of material research to utilize potential capabilities of nanomaterials during design and developing of nanodevices.

Training facilities

Material and technical equipment of the educational process: the labs within the Microtechnology and Diagnostics Centre help the students gain practical experience in nano- and microelectronics.

Scientific labs to the “Nanotechnologies and diagnostics” program are ideal for the modern research.

Available equipment: diagnostics assays (NTegra Therma scanning probe microscope), devices for measuring specific surfaces, worktables for optimal process of developing nanotechnology and acquiring nanomaterials, including quantum dots, porous nanocomposites with hierarchic structure, metamaterials etc.

Specializations within this programme

Your future career

Graduates are in demand at the companies engaged in the development and production of devices of micro- and nanoelectronics, optoelectronics, micro- and nanosystem technology.

Our graduates are working in the leading foreign and Russian companies:

- JSC “NRI Electron”;
- ATC Semiconductor Devices;
- “Eurasem” (“European Semiconductor Assembly”).