Area of study:

**28.03.01 Nanotechnology and Microsystems Engineering**

Program

**Micro- and Nanosystem Engineering Materials**

Degree: bachelor

Program length and study mode: intramural, 4 years

Language: Russian

Credits: 240

Start date: September 01, 2020

Location: Rostov-on-Don, Russia

Entry requirements: secondary school-level knowledge of natural sciences and mathematics.

**Program overview:**

You will receive:

1) training in the field of nanomaterials development and their diagnostics to solve the fundamental and practical problems of nanotechnology;

2) experience of manufacturing and studying the promising materials for development of components and functional devices of micro- and nanosystem engineering, study and analysis of their technical characteristics, and the assessment of their practical application;

3) experience of work with modern world-class equipment; skills in analysis, diagnostics of physical and chemical properties of nanomaterials and systems based on them.

**Program structure:**

The program contains a module of compulsory general courses (96 credits); a module of professional and special courses, including elective courses, project activity; a module of university academic mobility (120 credits); practical training, including research work (18 credits); and final certification (defense of the graduation thesis (6 credits)).

**Typical units of study may include:**

General physics; Mathematics; Chemistry; Information Technology; Methods of analysis and control of nanostructured materials and systems; Materials and methods of nanotechnology; Physico-chemical fundamentals of materials production methods; Fundamentals of crystallography, crystal chemistry; Crystallophysics

**Research areas:**

Development of new technologies for the creation, diagnostics and application of functional materials in various designs, study of physicochemical principles of nanostructure with desired characteristics development and the mechanisms of their formation.

**Careers:**

Engineers, nanotechnologists, scientific researchers and teachers in companies in the high-tech sector of the economy, leading domestic and international universities and research centers; in nanoindustry, scientific and nanotechnology centers.

**Get in touch:**


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