

Division: *School of Electronic Engineering and Computer Science*

Academic programme: *27.03.04 Control in Technical Systems, Software and Technical Tools and Systems for Control Automation*

Mode of study: *full-time*

Programme length: *4 years*

Programme level: *Bachelor's degree*

Language of instruction: *Russian*

Programme description:

Automation is a field of science and engineering aimed at creating and applying of the algorithmic, software and hardware support for the systems and tools of automation and control of various technical objects, including industrial enterprises (ferrous and non-ferrous metal industry, electric power stations, food industry, etc.) and urban infrastructure (construction, illumination, electric power and heat networks, gas supply facilities, transport, etc.). Therefore, this programme is focused on electronics, programming, computer-aided process control systems.

The obtained knowledge allows graduates to develop and operate automatic and computer-aided control systems, design software, databases, information and industrial networks.

Thus, this programme currently covers all the spheres of human activity since technical equipment is everywhere, and to control this technical equipment without human involvement, automatic tools are needed. In the English-speaking world this type of activity is known as Automation and Control, or System and Control Engineering, and specialists in this field are among the most in-demand ones.

Training is held at world-class laboratories fitted with state-of-the-art equipment and software. The level of training of students ensures that they easily adapt to the conditions at enterprises and technological processes.

Main programme-specific classes:

- *Programming and Fundamentals of Algorithmization;*
- *System Programming;*
- *Automatic Control Theory;*
- *Neural Network Technology of Control;*
- *Microcontroller-based Systems of Control;*
- *Programmable Logical Controllers;*
- *Digital Circuitry Engineering;*

- *Electronic Devices of Automatic Controls;*
- *Control and Measuring Equipment of Computer-aided Process Control Systems;*
- *Actuating Mechanisms and Driven Equipment of Computer-aided Process Control Systems;*
- *Networks of Computer-aided Process Control Systems;*
- *SCADA/HMI Systems;*
- *Design of Computer-aided Process Control Systems.*

Programme manager: *Tatiana A. Barbasova, Doctor of Sciences (Engineering),
Head of the Department of Automation and Control*