Control in Technical Systems (Bachelor)

Saint Petersburg Electrotechnical University "LETI"

Degree or qualification is awarded: **Bachelor**

Language of study: **Russian**
Mode of study: **full-time**
Duration: **4 years**
Availability of free education: **yes**
Price: **190 000 – 199 000 rubles per year**

Programme webpage at the university website:
https://etu.ru/en/study/bachelors-degree/27.03.04-control-in-technical-systems

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Special training integrates knowledge in control theory, information technologies, professional programming. After graduation students are able to participate in planning, designing, adjusting local and distributed control systems.

About training

The main purpose of the program is training specialists in the following fields:

- Development, design, study and implementation of mechatronics and robotic systems for automated control of technological processes and production systems;
- Intelligent control systems;
- Design, study and implementation of algorithmic, software and hardware tools for ship control systems, control systems for a ship’s main electrical power system, motion and technical tools of ships, ship’s information and control systems;
- Special software for microcontrollers, industrial logic controllers and other hardware platforms, as well as distributed control systems based on industrial networks.

Key points

- Students participate in innovative developments conducted at the school;
- The department cooperates with overseas universities of China, Finland, Czech Republic, Bulgaria, France, Germany, Ukraine;
- Education and research laboratories and the Resource Center have modern equipment;
- Students have unlimited opportunities to fulfil their potential.

Specializations within this programme

Graduates are successfully employed in many countries such as USA, Great Britain, Germany, France, Sweden, etc. Our graduates are in demand in the fields of oil and gas industry, power engineering, civil aviation equipment, shipbuilding, instrument making, machine-building and other industries in Russia and abroad.
Students with a Bachelor's degree in "Control in technical systems" work as:

- Software engineers;
- Designers and developers of automation systems;
- Developers of dispatching system;
- Developers of technical objects control system;
- Service engineers for electric drives and communication systems.

Graduates are familiar with

- Methods of modern control theory;
- Technologies for designing and manufacturing electronic devices;
- Fundamentals of industrial network design and information exchange;
- Measurement techniques and digital information processing algorithms;
- Modern standards and requirements to control systems;
- Advanced technologies for complex technical objects control;
- Design principles and structures of automation and control systems;
- Methods for developing algorithms for technical objects and processes control using information technologies;
- Fundamentals of engineering programming and system and technical tools design.

Graduates are able to

- Design control systems using modern CAD-systems;
- Create software for microcontrollers, programmable logic controllers and personal computers;
- Develop SCADA-systems of different complexity levels;
- Apply neural network technologies, artificial intelligence technologies, genetic algorithms and expert systems for handling control problems;
- Perform independent research and practical activities;
- Carry out commissioning works when creating automatic and automated control systems.