

Designing and Technology of Electronic Tools

South Ural State University

Degree or qualification is awarded: **Master's degree**

Language of study: **Russian**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **161 600 rubles**

Programme webpage at the university website:

<https://www.susu.ru/en/education/masters-degree-programs/infocommunication-technologies-and-communication-systems>

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This program allows you to specialize in the study of methods and technologies for processing, distribution, transmission and storage of information. The prospective systems of space and terrestrial radio communications, as well as prospective technologies of mobile communications and radio access are taught.

The graduate of this program, due to the nature of the basic and advanced highly professional training gains knowledge in the study and development of information distribution systems, as well as data transmission, processing and storage. The program puts emphasis on the study and application of modern methods of processing discrete signals in information and communication systems.

Specializations within this programme

Design and Technological Support of Mechanical Engineering Productions (Ensuring the Efficiency of Technological Processes of the Product Life Cycle)

The educational program 15.04.05 Design and Technological Support of Mechanical Engineering Productions take into account needs of the regional labor market, traditions and achievements of scientific and pedagogical school of the University in accordance with requirements of the Federal legislation.

The program aim is the formation of cultural and professional competencies and focus on meeting the educational and professional needs of the individual, the development of personal qualities of students, training of qualified professionals with competitive skills for the engineering industry. The main strategic objective of the program is to providing a high level of training to students in accordance with the existing and projected needs of enterprises and institutions of the region, city.

The Master's program in the field of Ensuring the Efficiency of Technological Processes of the Product Life Cycle is aimed at meeting the needs of regional mechanical engineering enterprises labor market.

The objective of the program is to train new generation of students in the field of mechanical engineering production who:

- possess have all the necessary skills of using high-performance technological equipment, devices, tools, measuring instruments and other technological equipment, as well as computer equipment and information technologies;
- are ready to use modern methods for the design of technological processes and technological equipment;
- are ready to work in a competitive environment in the labor market of mechanical engineering workers in the conditions of modernization of products and mechanical engineering enterprises;

The specific nature of the field lies in its focus on the conditions of modern computerized mechanical engineering

production and building knowledge and skills in the following areas:

- scientific basis of mechanical engineering technology, history and development prospects;
- theory of the position of the part, dimensional chains, productivity, technology and reliability of products;
- theoretical basis of automation of mechanical engineering industries. Integration and production flexibility;
- methods for detection and studies of the properties of dimensional, temporal, informational and economic relations in the automated integrated production;
- theory of automated connection assembly, technological equipment;
- design and research of automated and automatic manufacturing processes of machine-building parts, base and basing in the conditions of automated production, technological equipment;
- automation of the working cycle of automated production equipment;
- control of the installation process, static and dynamic adjustment of the technological system;
- optimization of technological processes, structure and layout of automated and automatic technological systems;
- diagnostics of the condition of tools and equipment;
- methods and means of product control;
- methods and instruments for processing research results;
- organization and planning of scientific research.