

Chemistry

South Ural State University

Degree or qualification is awarded: **Diploma, bachelor's degree**

Language of study: **Russian**

Mode of study: **full-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **151 800 Russian rubles**

Programme webpage at the university website:

<https://www.susu.ru/en/education/bachelors-specialist-degree-programs/040301-chemistry>

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This study program offers fundamental classical university education with application of technologies forming theoretical basics of main sections of general and inorganic, organic, analytical, physical, quantum chemistry, chemistry of high-molecular compounds, food, biochemistry and profession-oriented disciplines.

Training gives knowledge of industrial processes. It's conducted due to skills of chemical experiments, using the informational databases of calculation programs and modern innovation equipment. A special attraction of this educational program is preparing students for scientific-research activities, providing continued training in a magistracy and postgraduate study.

The students in the learning process is developing a commitment to self-development and disclosure of its creative potential, awareness of the social significance of the profession of chemist.

Graduates with the diploma of bachelor on speciality "Chemistry" are able to get a job as a teacher or researcher in the project organization or in research institutes. Graduates are employed in pharmaceutical companies, companies working in the field of chemical industry, cosmetic industry.

Young professionals can monitor the quality of production, to oversee the processes of synthesis of substances and carry out various tests.

Specializations within this programme

04.03.01 Chemistry

The graduate is able to solve professional problems in the field of chemistry and environmental objects, chemical expertise and environmental safety, standardization and certification, as well as inorganic and organic synthesis.

Advantages of the program:

The graduate has competencies to work in the field of chemical theory, chemical synthesis, ecology, pharmaceutical and medical chemistry, expertise, standardization and certification;

- fundamental training in all disciplines of the chemical cycle;
- studying chemistry in English during 4 years of study;
- the opportunity to engage in research work in modern laboratories.

Future employment:

- laboratories of scientific centers conducting research in the field of chemistry, biochemistry, geochemistry, petrochemistry, ecology, pharmacology;
- laboratories of chemical, food, metallurgical, pharmaceutical, petrochemical, mining and gas production industries;
- certification centers;
- expert forensic centers of the Department of Internal Affairs, the Federal Security Service;
- customs services; research organizations of the Russian Academy of Sciences;
- educational institutions.

Directions of scientific research of the Department of Theoretical and Applied Chemistry:

- development of methods for the directed synthesis of organoelement compounds with significant properties;
- development of methods for multi-scale (from subatomic to macro-object) supercomputer modelling;
- creation of new heterocyclic systems - promising biologically active substances that are the basis of modern drug preparation;
- electrochemistry of metals, alloys and carbon materials.

Students actively participate in scientific research, have joint scientific publications with teachers, and present their research at conferences in Russia and abroad. For the best student work they are awarded with diplomas, awards and prizes at various competitions and All-Russian conferences.