

Biotechnology

South Ural State University

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

Language of study: **Russian, English**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **no**

Price: **161 600 rubles**

Programme webpage at the university website:

<https://www.susu.ru/ru/190401-biotechnology-industrial-and-environmental-biotechnology>

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Our alumni can work in different sectors of food industry: confectionary, bread-baking, brewing, liquor, milling industries. Students are taught by highly qualified specialists who have wide experience in pedagogical and practical work in this sector.

Special attention is paid to chemistry, microbiology, standardization, ecological safety of raw materials and products, as well as technologies and organization of production (technological processes, assortment, and product quality control). Students study enterprise design, economics and production management, basics of business, organization of small-sized business, management and marketing. They get fundamental knowledge of jurisprudence. Great attention is paid to practical training.

Students undergo introductory, computational and practical training in enterprises of the food and processing industry.

After graduation holders of a master's degree are prepared for effective management of complex technological processes in key sectors of the food industry, professional work in design and research organizations which design, develop new technologies and improve existing ones; for work in educational institutions and administrative bodies of food industry enterprises. Master may hold higher-level positions. Our alumni have senior and engineer positions in food industry enterprises of the Chelyabinsk region and the city.

The content of the educational program is focused on developing students' professional competencies in the following fields:

- regulation of biotechnological processes;
- solving problems of the development and modification of food ingredients, including microorganisms, valuable plant and animal components;
- creation of new food products with specified composition and properties.

Specializations within this programme

19.04.01 Biotechnology (Food Biotechnology)

The field of professional activity of the graduates is related to the biotechnologies of manufacturing new food products and alimentary raw materials, functional food products, dietary (medical and prophylactic) food; monitoring food quality and safety, and developing innovative biotechnologies in compliance with the national policy of the Russian Federation in the field of Healthy Nutrition for the Population, as well as with the Technological Platform "Bioindustry and Bioresources" (BioTech2030)

The professional competences aim at:

- creating the technologies for producing new foods by using microbiological synthesis, genetic engineering, and nanobiotechnologies;
- obtaining and applying enzymes, microorganisms, cell cultures of animals and plants, and products of their biosynthesis and biotransformation;
- biotechnologies for recycling and disposal of the waste from industries and agriculture, and for environment protection;

Advantages of the programme:

- Demand for the graduates at food-industry enterprises, research-and-development institutes, and microbiology and biotechnology laboratories.
- Getting the practical skills in the field of developing and obtaining biotechnological products.
- Opportunity to obtain the knowledge and gain world-class practical experience at the leading sector-related enterprises. A unique theory and practice module with the participation of world-class scientists and leading specialists from the key enterprises of the industry.

The training under this educational programme is provided by renowned foreign scientists from Australia, India, Bulgaria; the leading academic staff members of the Department of Food Technology and Biotechnology, who are in command of the specialization competencies; and the practical training by top managers and leading specialists of the food-industry enterprises.