Biochemical Physics

Siberian Federal University

Degree or qualification is awarded: **Bachelor's degree diploma**

Language of study: **Russian**
Mode of study: **full-time**
Duration: **4 years**
Availability of free education: **yes**
Price:

Programme webpage at the university website: http://edu.sfu-kras.ru/programs

The educational program Biochemical Physics, major in Physics is designed to ensure the formation of the biosphere and noosphere world view and a set of core competencies for research and educational activities in the field of biology, biophysics, biotechnology and ecology for the study of wildlife and its patterns, the use of biological systems for economic and medical purposes, environmental protection, etc. ., on the basis of active and interactive forms of education, involving the participation of students in basic and applied scientific research, innovation development of science and high technologies in Russia, on the problems of ecology and sustainable development of ecosystems under the conditions of anthropogenic impact.

Program tasks:

- creating conditions for students to acquire the necessary level of fundamental knowledge in the field of natural sciences, skills, abilities, work experience for carrying out professional activities in the field of biochemical physics, biological engineering and biophysics, in particular, mastering the physical, engineering and physical, biophysical, chemical and physical, medical and physical, bioengineering, environmental technologies, methods of biophysical expertise and monitoring, etc.;
- creating the conditions for the formation of a set of key competencies for students for research and educational activities in the field of biochemical physics, biological engineering and biophysics;
- the development of students' research skills in the performance of individual scientific work in the field of biochemical physics, biological engineering and biophysics: students will master all stages of scientific
- research from the formulation of a scientific problem up to obtaining scientific results and the experimental data analysis.

Competitive advantages for a graduate: graduates of the program are highly qualified specialists who possess both classical methods of biological and ecological analysis, modern knowledge and methods in the field of biochemical physics and biophysics, and the latest physical and chemical, engineering and physical, physical and medical, and environmental protection tools and technologies for studying different biological systems organization level. Research is carried out in world-class research laboratories under the guidance of leading scientists in the field of biotechnology, biophysics, ecology, genomics and proteomics both in scientific laboratories of the university and in partner enterprises. The part of educational process is carried out in one of the most advanced SibFU laboratories – the Laboratory of bioluminescent biotechnologies, engaged in fundamental research on the phenomenon of light emission by living organisms, i.e. bioluminescence.

Employment: graduates can work in research institutes, pharmaceutical companies, biomedical laboratories, nature conservation and environmental management bodies, universities. Graduates of bachelor programs have the opportunity to continue their education in the master's degree programs of SibFU or in other universities and institutions, including those abroad.

 Strategic partners:

1. Academic institutes of the Federal Research Center "Krasnoyarsk Scientific Center of the Siberian Branch of the

Russian Academy of Sciences" (Institute of Biophysics, Siberian branch of the Russian Academy of Sciences, Sukachev Forest Institute, Siberian branch of the Russian Academy of Sciences).
2. Mining and chemical combine (Zheleznogorsk).
3. Federal State Institution Sanitary and Epidemiological Supervision Center.
4. International Research Center for the Study of the Extreme Condition of the Body (Siberian branch of the Russian Academy of Sciences).

Specializations within this programme