Biological Engineering

Siberian Federal University

Degree or qualification is awarded: **Master of Science/M.Sc. in Biology**

Language of study: **English**
Mode of study: **full-time**
Duration: **2 years**
Availability of free education: **no**
Price: **250 000 RUB per year**

Programme webpage at the university website: http://www.sfu-kras.ru/en/masters/biological-engineering#tab1

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The Program is aimed at students having background in natural science and wishing to master contemporary methodology of scientific research in order to pursue career in the field of biological engineering. The scientific projection in biological engineering aims to encourage research skills by students through an individual research project in biology, biological engineering or biophysics. Students will follow all steps of research process from the problem statement to the achievement and analysis of experimental results.
Master's Program "Biological engineering" is delivered by an experienced academic staff having a comprehensive background in fundamental research and practical applications in industries. The program is designed with emphasis on practical skills development and students work in the modern and well-equipped SibFU Laboratory of Bioluminescent Biotechnologies (in Russian). This laboratory was established through the collaboration of the world's strongest team of scientists engaged in fundamental research of light emission by living organisms, i. e. bioluminescence, and the Nobel Laureate Professor Osamu Shimomura.

Training
Methods: lectures, lab experiments, case studies and group discussions.
Teaching staff: SibFU Professors and visiting lecturers from universities of Russia, USA, Italy, China, Spain, UK and other countries.
The major part of the Program's training takes place at the modern and well-equipped SibFU Laboratory of Bioluminescent Biotechnologies, led by Nobel Laureate Professor Osamu Shimomura, in one of the world's strongest team of scientists engaged in fundamental research of light emission by living organisms, i.e. bioluminescence.

Research projects
While following the Program students have to deal with the phenomenon of bioluminescence in all its aspects: from genetic and molecular to evolutionary and ecological. Master's research projects are focused on studying the chemical nature of light emission by new luminous species (fungi, soil worms, coelenterates, bacteria, etc.), modelling the enzyme behavior in cell hyaloplasm, development of new recombinant bioluminescent organisms and of a new generation of bioluminescent biosensors for environmental monitoring and medical diagnostics as well as on other fundamental and applied topics.

Career opportunities: with a Master's degree in Biosciences you can obtain a position in both public and private sector.

Research career: the Master's degree holder can continue studying to earn a PhD SibFU degree.

Specializations within this programme