

Fundamental and Applied Biology

National Research Tomsk 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: **no**

Price: **223 700 RUB per year**

Programme webpage at the university website: <http://bio.tsu.ru/node/704>

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The Master's Program "Fundamental and Applied Biology" aims at in-depth study of fundamentals of biology, its methodology, theory and methods, development of students' erudition in the field of biological sciences, their ability to define the philosophical and sociological context of a number of modern scientific and technical problems. In addition, the program is aimed to prepare competitive researchers with wide practical training in different fields of biology. The program gives knowledge about mechanisms and basic laws, as well as the biological effect of various physical and chemical factors in order to understand the possibilities of using them to control the state of living systems, for the conscious practical application of knowledge and innovations gained. Undergraduates choose individual curriculum, in accordance with their major in one of the areas: zoology vertebrate, invertebrate zoology, biology, reproduction and development of invertebrates, botany, plant introduction, human and animal physiology, neuroscience, biophysics, ichthyology and hydrobiology. The uniqueness of the implemented educational programs is in preserving the best traditions of Russian science and research and implementing new methods of modern science.

The program aims to train highly qualified specialists in biology for successful scientific – research, teaching and production activities in the fields of biology, biomedicine, veterinary science, ecology, biotechnology, genetics. The area of professional activity: Masters in Biology having a fundamental university training in biology, physics and chemistry also have high research and innovation abilities, they are able to successfully implement their knowledge in various kinds of activities for solving complex problems (development of new principles, methods, techniques and technologies in medicine, veterinary medicine, agriculture, environmental protection and other fields.

Brief description of the program content.

The basic educational program includes the following subjects: Philosophical Problems of Natural Science, Foreign Language, History and Methodology of Biology, Information Biology, Global Ecology and others.

Masters in Biology study special disciplines in their chosen major of study: Zoology of vertebrates, Zoology of invertebrates, reproduction biology and development of invertebrates, botany, plant introduction, human and animal physiology, neuroscience, biophysics, ichthyology and hydrobiology. An extensive list of elective courses and elective courses is proposed: methodology of scientific research, industrial innovation in biology, biodiversity, using modern methods of genome studies and transcriptome in physiology, genomics, physiology, reproductive systems, and many others.

Admission to the program is carried out on a competitive basis following the results of admission tests: an entrance examination and an interview.

Specializations within this programme