

Biological Science

University of Tyumen

Degree or qualification is awarded: **Researcher. Educator - researcher**

Language of study: **Russian**

Mode of study: **full-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **184 572 RUB per year**

Programme webpage at the university website: <https://www.utmn.ru/en/research/postgraduate-degrees/484704/>

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Study of wildlife and its laws at different levels of organization. The use of modern biological techniques and biological technologies in commercial and medical applications, protection and rational use of natural resources.

Specializations within this programme

Biochemistry., Biotechnology (including bionanotechnologies)

- **Biochemistry**

-the study of individual biomolecules' features, biochemical processes, particularly metabolism regulation in the organism;
the use of features of biological molecules and biochemical processes in biological systems for commercial, biomedical and environmental objectives;

-the solution of professional tasks in the field of education, as well as in public and administrative bodies, research organizations with biochemical and molecular diagnostic profile, the field of molecular environmental monitoring, performing biological services to individuals and organizations.

- **Biotechnology (including bionanotechnologies)**

-the application of biological systems for commercial and biomedical purposes, protection and rational use of natural resources;

-the creation of technologies for the biological production using plant cell cultures, animals, microorganisms, microbial synthesis, genetic engineering and bionanotechnology;

-processing and analysis of information on biological objects (decoded genomes, three-dimensional structures of biomolecules, the interaction of biological objects) using modern software;

-the development of scientific and technical documentation and regulations in the sphere of professional activity, preparing specialists in biotechnology and related disciplines in educational institutions, the solution of professional problems in research organizations, public and administrative bodies.

Zoology

- **Zoology**

-the study of nature and its laws:

the study of the anatomy issues, morphology and systematics of animals, zoogeography and faunistics, ecological and physiological processes of adaptation to environmental conditions;

-the application of biological systems in commercial and biomedical purposes, protection and rational use of natural resources, including the monitoring of biological diversity..;

-the solution of professional tasks in the field of education, as well as in public and administrative bodies, research organizations performing biological services to individuals and organizations.

Ichthyology., Parasitology

- **Ichthyology**

-the study of nature and its laws: the anatomical, morphological and physiological characteristics of fish organisms, processes of early fish ontogenesis, fauna and ecological features of various types of fish of various natural areas of the world;

-the application of biological systems for commercial and biomedical purposes, protection and rational use of natural resources, including fisheries and aquaculture;

-the resolution of professional tasks in the field of education, as well as in public and administrative bodies, research organizations, representing the biological services to individuals and organizations involved in fish farming and use of water resources.

- **Parasitology**

-the study of nature and its laws: anatomy issues and morphology of parasitic organisms of different taxonomic groups, characteristics of the parasite cycle development, coadaptation problems in the "parasite-host" system;

-the application of biological systems in commercial and biomedical purposes, protection and rational use of natural resources, including the determination of the natural foci of parasitic diseases and the ways of their localization and elimination;

-solution of professional tasks in the field of education, as well as in public and administrative bodies, research organizations, performing biological services for individuals and organizations.

Physiology

- **Physiology**

-the study of nature, its physiological laws and functions regulating mechanisms of a living organism in a changing

environment; the use of certain characteristics of human and animal physiology in commercial and biomedical applications; the solution of professional tasks in the field of education, as well as in public and administrative bodies of biomedical profile, research organizations, performing biological and biomedical services to individuals and organizations.

Ecology (Biology)

- **Ecology (Biology)**

- study populations, ecosystems and their functioning patterns, changes under the environmental factors influence;
- study of ecosystem dynamics in the conditions of increasing anthropogenic impact due to the development of oil and gas complex;
- the use of the identified patterns in the protection of biodiversity, the environment and the rational use of natural resources;
- the resolution of professional tasks in the field of ecology, professional environmental education, as well as tasks in public and administrative bodies, research organizations related to the environmental protection and management.