

Ecology (Technical Science)

Far Eastern Federal University

Degree or qualification is awarded: **Candidate of Sciences**

Language of study: **Russian**

Mode of study: **full-time, part-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **320 000 rub per year (full-time) / 160 000 rub per year (part-time)**

Programme webpage at the university website:

<https://www.dvfu.ru/upload/medialibrary/a06/%D0%9F%D0%B5%D1%80%D0%B5%D1%87%D0%B5%D0%BD%D1%8C%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%20%D0%B0%D1%81%D0%BF%D0%B8%D1%80%D0%B0%D0%BD%D1%82%D1%83%D1%80%D1%8B,%20%D0%BE%D0%B1%D1%8A%D1%8F%D0%B2%D0%BB%D0%B5%D0%BD%D0%BD%D1%8B%D1%85%20%D0%B2%20%D0%BD%D0%B0%D0%B1%D0%BE%D1%80%202020%20%D0%B3%D0%BE%D0%B4%D0%B0.pdf>

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The purpose of the educational program is to acquire the level of competencies necessary for the implementation of professional activities and preparation for the defense of a scientific and qualifying work (dissertation) for the degree of candidate of sciences.

One of the most important tasks of the educational program "Ecology (technical sciences)" is the formation of a graduate student of universal, general professional and professional competencies, allowing him to become a highly professional specialist in the chosen field of scientific research.

The area of professional activity of graduates who have mastered the postgraduate program includes: research, production and use of enzymes, viruses, microorganisms, cell cultures of animals and plants, products of their biosynthesis and biotransformation; creation of technologies for obtaining new types of products, including products obtained using microbiological synthesis, biocatalysis, genetic engineering and nanobiotechnology; development of scientific and technical documentation and technological regulations for the production of biotechnological products; implementation of biotechnological processes and industries in accordance with the observance of legislative and regulatory national and international acts; organization and implementation of quality control of raw materials, intermediate products and finished products; solving complex problems in the field of environmental protection, aimed at ensuring the rational use of natural resources and the protection of environmental objects; development of scientific foundations, creation and implementation of energy- and resource-saving, environmentally friendly technologies in the production of basic inorganic substances, products of basic and fine organic synthesis, polymeric materials, products of oil, gas and solid fuels, microbiological synthesis, medicines and food products; development of methods for handling industrial and household waste and secondary raw materials. ensuring the environmental safety of industrial production and facilities; implementation of sustainable development and environmental quality management, including environmental management methods; pedagogical activity in institutions of the system of higher and secondary vocational education.

The objects of professional activity of graduates who have mastered the postgraduate program are: microorganisms, cell cultures of animals and plants, viruses, enzymes, biologically active chemicals; devices and equipment for studying the properties of microorganisms used, cell cultures obtained by biosynthesis of substances obtained in laboratory and industrial conditions; biomass, plants and equipment for biotechnological processes; quality control tools for raw materials, semi-finished products and finished products; regulations for the production of biotechnology products, international standards; natural, anthropogenic, natural-economic, ecological-economic, production, social, public territorial systems and structures at the global, national, regional and local levels; state planning, control, monitoring, expertise of environmental components of all forms of economic activity; sustainable development programs at all levels, as well as education, education and public health; basic chemical, petrochemical and biotechnological industries and processes and devices in chemical technology, petrochemistry and biotechnology;

industrial installations and technological schemes, including automated control systems; methods and means of assessing the state of the environment and protecting it from anthropogenic impact; artificial intelligence systems in chemical technology, petrochemistry and biotechnology.

The types of professional activities for which graduates who have mastered the postgraduate program are preparing: research activities in the field of industrial biotechnology and ecology; teaching activity in educational programs of higher education. The postgraduate program is aimed at mastering all types of professional activities for which the graduate is preparing.

The demand for graduates of the OE "Ecology (technical sciences)" in the modern labor market is ensured by the possibility of successful activities in the following structures: research, scientific and production, production, design organizations; environmental, general education and educational institutions of professional education.

Period of study: full time – 4 years, part-time – 5 years

Specializations within this programme