

1.5.15. Ecology



Уровень Training level:	aspirantura
Form of training:	aboutchnaya
Duration of training:	4 years old
Group of scientific specialties:	<i>Biological sciences</i>
Number of seats:	1 (budget)

Program Description

The purpose of mastering the postgraduate program is to develop knowledge, skills and abilities in accordance with federal state requirements and the passport of a scientific specialty, as well as to write, design and submit for the defense of a dissertation for the degree of Candidate of Sciences containing the solution of a scientific problem that is important for the development of environmental knowledge.

Ecology is a science that studies the structure and functioning of living systems (populations, communities, ecosystems) in space and time under natural and human-altered conditions, understanding the role and place of humans in the biosphere. Understanding the place of man, the laws of functioning of living things, and the cause-and-effect relationships of natural processes makes professional activity eco-friendly and organized, and leads to the formation of a stable and safe environment.

The program is aimed at comprehensive and high-quality training of scientific and scientific-pedagogical personnel in the following areas:

autoecology – ecology of individual individuals as representatives of a certain type of organisms.
population ecology (demecology) – study of the laws governing the dynamics of population size, their spatial and demographic structure; establishment of mechanisms underlying the regulation of the number of species and ensuring the stability of the population in changing biogenic and abiotic conditions;

synecology (community ecology) – studies the relationship of populations, communities, and ecosystems to the environment.

biogeocenology – astudy of ecological systems.

factorial ecology – the study of the influence of abiotic factors on living organisms in natural conditions to establish the limits of tolerance and assess the resistance of organisms to external influences;

zgeographical ecology (geoecology) – studies the ecological patterns of geographical processes in ecosystems of high hierarchy levels (land, sea and fresh water, highlands, etc.); this alsoincludes geochemical ecology.

*прикладная экология*applied ecology – development of principles and practical measures aimed at protecting wildlife, both at the species and ecosystem levels; development of principles for creating artificial ecosystems (agroecosystems, aquaculture facilities, etc.) and managing their functioning; andinvestigation of the impact of anthropogenic factors on ecosystems at various levels in order to develop environmentally sound standards for the impact of economicactivities on the environment. human activity on wildlife;

Human ecology isthe study of general laws of interaction between humans and the biosphere; the study of the influence of environmental conditions on people (at the individual and population levels); thedevelopment of principles and mechanisms that ensure the sustainable development of human society while preserving biodiversity and a stable state of the natural environment.