Applied Hydrometeorology (05.03.05)

Q**ualification:**
• Academic Bachelor Degree
• Applied Bachelor Degree

Forms and terms of education:
• Full-time: 4 years.
• Distance: 5 years.

Language of study:
Russian language.

Area of professional activity of graduates of Bachelor's programs with the qualification "Academic Bachelor Degree" includes scientific and industrial aspects of operational hydrometeorological support for economic sectors to achieve goals and objectives of socio-economic development of a state and to ensure its national security; modern methods and technologies application environmental monitoring; analysis and forecast of atmosphere, oceanic and land water condition and assessment of the possible changes caused by natural and anthropogenic changes; life safety, environmental protection and environmental management based on examination of hydrometeorological conditions and climatic factors.

O**bjects of professional activity** of graduates of undergraduate programs with qualification "Academic Bachelor Degree" is atmosphere, ocean and land water; methods, tools and technologies for monitoring, analysis and prediction of their conditions; modeling processes in atmosphere, ocean and land waters.

Professional activities which graduates with undergraduate qualification "Academic Bachelor Degree" are prepared for:
• Research activities;
• Project activities;
• Organizational and management activities.

Professional activities which graduates with undergraduate qualification "Applied Bachelor Degree" are prepared for:
• Production and technology activities;
• Organizational and managementactivities,

Graduates with qualifications "Academic Bachelor Degree" according to type (types) of professional activity will be ready to solve **the following professional tasks:**

Research activities:

- search and analysis of domestic and foreign scientific and technical information on the research subject;
- participation in research on specific topics in accordance with the approved methods;

- analysis and forecast of atmospheric, oceanic and surface waters conditions, including conditions based on mathematical models and software packages;
- participation in drafting of hydrometeorological reviews, yearbooks, directories to provide hydrometeorological information for various economic sectors;
- participation in drafting of normative documents on examination of impact of meteorological factors on design, construction and operation of various sectors national economy;
- participation in performing experiments, making observations and measurements, drawing their description and formulation of conclusions;
- preparation of reports, participation in research presentation and results development;
- participation in development of new methods of observation.

Project activity:

- participation in work to implement objectives of the project (program) to achieve predetermined criteria and indicators;
- practical implementation of solution for a problem, analysis of results ;

Organizational and managerial activities:

- participation in preparation of documentation and reports;
- organization of work for small groups of performers;
- developing operational plans of working production units;
- informing the general public about conditions, negative impact of various meteorological factors and weather events.

Graduate of an undergraduate degree with qualifications "Applied Bachelor Degree" according to the type (types) of professional activity will be ready to solve **the following professional tasks:**

industrial and technological activities:

- providing economic sectors with hydrometeorological information, including operational maintenance of current and prognostic information, preparation of climatic yearbooks of hydrometeorological directories, databases, as well as providing information about characteristics of atmospheric conditions, oceanic and seas conditions and rivers and inland waters conditions;
- organization and effective implementation of hydrometeorological observations, input data quality control, joint analysis of data and characteristics of hydrometeorological processes;
- preparation of profiled prognostic information in accordance with the approved methodologies;
- assessment of quality of information products in the field of hydrometeorology, transmission of products through communication channels;
- efficient using of measuring instruments and other equipment, techniques, algorithms, models and calculations, which are elements of technological processes of hydrometeorological support;
- conducting of standard and certification testing of equipment;
- participation in work on the development of new technological processes of hydrometeorological support.

Organizational and management activities:

- participation in drafting of documentation and reports;
- organization of operational work of small units, which are engaged in hydrometeorological support of various economic sectors;
- development of operationalworkplans of primary production units;
- informing general public conditions, changes and negative impact of various meteorological factors and weather events.