

Applied Hydrometeorology (05.04.05)

The qualification:

- Master of Science Degree

Forms and terms of education:

- Full-time: 2 years

Language of study:

Russian

Area of professional activity includes engineering methods and techniques of environmental monitoring, analysis and forecast of state of atmosphere, environmental protection and conservation on the basis of weather conditions and climatic factors.

Objects of professional activity of graduates of Master's programs are methods, technical means and technologies for monitoring, analysis and forecasting of state of atmosphere ocean and inland waters.

Types of professional activities of graduates of Master's programs:

- research activity;
- production and technological activity;
- organizational and managerial activity;
- project activity.

Graduates of **Master's programs** in accordance with the type (types) of professional activity will be ready to solve the following **professional tasks**:

Research activities:

- development of working plans and programs, conduction of research and technological development, preparation of individual tasks for performers;
- collection, processing, analysis and systematization of scientific and technical information related to research;
- development of methods and organization of experiments and tests, analysis of their results;
- preparation of scientific and technical reports, surveys, publications research results;
- development of physical and mathematical models of hydrometeorological processes, phenomena and objects;
- management of research results and commercialization of rights of intellectual property;

Production and technological activities:

- modernization of existing and development of new methods and tools for forecasting processes occurring in atmosphere, ocean and inland waters;

- development and modernization of methods and means of influence on processes occurring in atmosphere, ocean and land waters;
- development and modernization of methods for monitoring state of atmosphere, ocean and surface waters;
- designing technological processes, development of work norms, technological standards, models of analysis and calculation of technological equipment;
- conduction of research on causes of errors and low predictive skill to develop proposals for their prevention and elimination;

Organizational and managerial activities:

- organization of group work, decision-making with the existence of variety of opinions, determination of order for work execution;
- search for optimal solutions to create products on the basis of new requirements for quality, costs and deadlines;
- improvement of technology, organization of staff development units;
- support of a single information space of planning and management of production at all stages;

Project activity:

- preparation of tasks for development of project solutions;
- development of technical tasks for design and manufacture of nonstandard equipment and technological equipment;
- conduction of technical calculations for projects, technical and economic analysis and value analysis of efficiency of projected technologies, evaluation of innovative potential of projects;
- development of methodological and normative documents, technical documentation, as well as proposals and measures projects and programs realization.