**ANNOTATION**

of educational program

**15.04.02 Technological machines and equipment**

**Training profile: Equipment, tools and processes of mechanical, physical and technical processing**

**Program Name**: 15.04.02 Technological machinery and equipment, educational program "The equipment, tools and processes of mechanical and physical and technical processing."

**Program Objectives**: The aim of the educational program "The equipment, tools and processes of mechanical and physical and technical processing" is to train masters for the industrial, research and educational organizations with competencies to create competitive high-techproducts, for the development of new equipment and improvement of existing manufacturing equipment, for application and improving the means and methods of equipment design and modeling.

**Terms of full time education** - 2 years (Master).

**Graduate departments**: Department of Mechanical engineering technology.

**The area of professional activity**: master program include steaching activities, aswellas areas of science and technology, containing a set of tools, methods, techniques and methods of human activity aimedat creating competitive products of mechanical engineering and based on the use of modern methods of design, calculation, mathematical, physical and computer modeling; using to olsofdesignand technological informatics and computer-aided design; development of quality management systems in relation to the specific conditions of production on the basis of international standards; marketing research with the search for optimal solutions to create products based on quality, reliability and cost, aswellas the timing of its production, life safety and environmental cleanliness; the creation of technologically based engineering production of special equipment, components, materialsand semi-finished products for the nuclear facilities on the basis of the production systemof state corporation "Rosatom".

**Objects of professional activity**: machinery and equipment of various complexes and nuclear engineering industries, energy and general engineering, process equipment; vacuum and compressor machines, hydraulicmachines, hydraulicdrivesandgidropnevmo automatics; technological equipment and means of mechanization and automation of mechanical engineering; manufacturing processes, their development and the development of new technologies; means of information, metrology, diagnostic and management software of technological systems for achieving the quality of products; specifications and technical documentation, standardization and certification systems, methods and means of testing and quality control of products of mechanical engineering; educational organizations.

**Features of the curriculum**: The curriculum include ssubjects of general, pedagogical, research, professional and special training and makesitpossible to expand and (or) enhance knowledge, skills and competences defined by the previous stage of education, enable student stogain in-depth knowledge and skills for successful professional , scientific and researchactivities. The curriculumincl udesteaching and research design and technological training, professional knowledge of CAD / CAM / CAE-programs for the production cycle. A large amount of study time is dedicated to the research work and practice that will help to write the master's final qualifying work, to develop skills to work with modern equipment, skills of practical use of the acquired knowledge to solve practical mechanical engineering problems.

**The list of enterprises for practical training and employment of graduates**: Research work of students is held after the second (educational practice), third (internship) course and during the fourth yearof studying before writing the master's final qualifying work (pre-diplomapractice).

The list of enterprises for practicaltraining: Research Institute of Atomic Reactors, Zenit-himmash, Dimitrovgrad Auto Aggregate Plant “DAAZ”, Sosny Research and Development Company and etc.