


<p style="text-align: center;">Area of study: 12.04.01 Equipment Engineering Program: Computer and Measuring Technologies in Equipment Engineering</p> <p>Degree: master Program length and study mode: 2 years (intramural) Language: Russian Credits: 120 Start date: September 2020 Location: Institute for Advanced Technologies and Piezotechnics, Rostov-on-Don</p> <p>Entry requirements: a bachelor or specialist's degree.</p>	<p style="text-align: center;">Program overview:</p> <p>Development of equipment engineering is considered as a priority sector of Russia's economic policy and an indispensable condition for ensuring the economic and military security of the country.</p> <p>The purpose of the master's program is to develop the general cultural and professional skills of a student in accordance with the requirements of the Federal Educational Standards.</p> <p>The students conduct research; develop and apply the mathematical models, methods, programs and computer technology for the instrument engineering measuring tasks solution; as well as develop the new software products and automated systems, measuring and information systems based on intelligent information and measuring technologies.</p> <p>Program structure:</p> <p>The basic curriculum is developed using the modular principle, based on the requirements of the Federal Educational Standards and the Standard of development and implementation of educational programs of SFedU. The program consists of the following units:</p> <ul style="list-style-type: none"> - <i>The mandatory part</i> <ul style="list-style-type: none"> Unit 1 - Basic courses Unit 2 - Work experience internship (research work) - <i>The variable part</i> <ul style="list-style-type: none"> Unit 1 - Modules formed by participants of educational relations 	<p>Careers:</p> <ul style="list-style-type: none"> • "KVANT" Research and Production Enterprise, • JSC "Priboy", • Rostov Research Institute of Radio Communications, • JSC Radio Engineering Institute named after academician A.L. Mintz. <p>Get in touch:</p> <ul style="list-style-type: none"> - <i>Alexander V. Nagaenko</i> - <i>Candidate of Technical Sciences</i> - +7-928-194-04-59 - nagaenko@sfedu.ru; - nagalexandr@gmail.com - <i>Scopus ID: 57195472273</i> 
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Unit 2 - Practical training (design, production, technological, pre-graduation)

Typical units of study may include:

Foreign language for professional purposes

Mathematical modeling of devices and systems

History and methodology of science and technology

Research and development management

Research areas:

A graduate is ready to solve the following professional tasks:

- raising a problem and generating a plan of the scientific research in the field of instrument engineering using information technologies;
- building the mathematical models of research objects and choosing a numerical method for their modeling, selection or development of an algorithm for the problem solution;
- selection of the optimal method, development of experimental research programs, execution of measurements;
- writing the reports, articles, abstracts on the basis of modern editing and printing tools in accordance with the established requirements;
- defense of the priority and novelty of the research results, using the legal framework for the protection of intellectual property.