**Annotation of the programme**

**09.06.01 Informatics and computer engineering**

**(highly qualified personnel training)**

**Title of the programme:** 05.13.06 Automation and control of technological processes and productions.

**Objectives of the programme:** making trained conditions for gaining required professional level of knowledge, skills, experience and background to defense scientific qualification work (thesis) for getting a scientific degree Master of Science.

**Terms of education**: at the full-time department – 4 years, external – 5 years.

**Speciality chair:** Chair of electronics and automatics of physical devices (№ 5).

**Professional spheres:** science, engineering, technology and pedagogy covering sets of tasks of Informatics and computer engineering including the theory development, making, application and operation of perspective computer systems, networks and complexes, mathematical software.

**Objects of the professional activity:** the chosen area of scientific knowledge and also the scientific interdisciplinary problems contain: computers, complexes, systems and networks; the software of computer facilities and automated systems (programmes, complexes and systems); mathematical, information, technical, linguistic, ergonomic, organizational support, software and legal groundwork of automated information computing designing and control systems; highly productive computation and supercomputer equipment; development technologies of computer facilities and software product technical means; data structures, database and knowledge, the system for database control.

**Types of professional activity:** research and innovative activity in the field of computer operation, complexes, computer networks, producing of computer facility elements and devices on new physical and technical principles, processing and data storage methods, algorithms, programmes, programming languages and human-machine interfaces, development of new mathematical methods and support means of intellectual data processing, information and automated systems of designing and control in the appendix to various subject fields; teaching according to education schemes of the higher education.

**Curriculum features:**

The main feature of the educational process is highly qualified personnel training aimed to mastering all types of the professional activity a graduate to get ready. Postgraduate students’ scientific and research work is fulfilled in close connection with the works carried out on the chairs of STI NRNU "MEPHI" and in the research organizations of the state corporation ROSATOM and the Russian Academy of Sciences.

**The list of enterprises for the practical training:** structural department chairs and laboratories of NRNU "MEPHI"; chairs and laboratories of STI NRNU "MEPHI"; profile enterprises of the state corporation ROSATOM; scientific and research institutions of the Russian Academy of Sciences; academic scientific and research organizations of the Russian Federation economy science-based industries.