**12.05.01 Electronic and optical electronic devices and special purpose systems**

**Program Summary**

**Program title**: Electronic and optical electronic devices and special purpose systems

**Program goals**: professional training in the field of electronic and optoelectronic devices and systems, optical devices for special purposes for research and manufacturing companies of the nuclear and other high-tech industries, with graduates having universal and specialized competencies that contribute to their social mobility and competitiveness in the labour market.

**Duration of training**: full-time education 5 years.

**Department**: Department of special instrument-making of SPTI NRNU MEPhI.

**Areas of expertise**: research, design, analytical, organizational, administrative, operational; topics of science, engineering and technology in areas related to research, design, manufacturing and operation of electronic and optoelectronic devices and systems for special applications, optoelectronic information and measuring devices and systems, sources and receivers of optical radiation.

The objects of professional activity: physical processes that characterize propagation and interaction with matter of electromagnetic radiation of optical and radio frequency range; electronic and opto-electronic devices and special purpose systems designed to receive, store and process information; the technology of obtaining, storing and processing of information using electronic and optical electronic devices and systems for special purposes.

**Curriculum features**: the curriculum complies with NRNU MEPhI higher education standards taking into account the requirements of Rosatom state corporation as the main employer of graduates. The educational trajectory of a specialist is formed taking into account their choice of study courses. Core courses focus on the study of special courses determining the direction of future industrial activity and includes the study of modern innovative methods of obtaining and processing information, as well as the development, design and production technology of special electronic and optoelectronic devices.

Research work of students is carried out in close connection with the work conducted at the department and in the offices of the Russian Federal Nuclear Center – VNIIEF.

Graduates of the Department receive training for solving a wide range of tasks in the interests of scientific research and production organizations of the nuclear and other high-tech industries.

**Enterprises for internship and employment of graduates:**

Russian Federal Nuclear Center VNIIEF; enterprises of Rosatom state corporation.