**15.04.03 Applied mechanics**

**Program Summary**

**Program title**: Dynamics and strength of machines, devices and equipment.

**Program goals**: training of graduate students in the field of applied mechanics, techniques used for dynamic mechanical testing of machines, components and structures, their design and development with the use of modern information technologies for scientific and industrial organizations of nuclear and other high-tech industries, possessing universal and specialized competencies that contribute to their social mobility and competitiveness in the labour market.

**Duration of study**: full-time education - 2 years.

**Department**: Department of theoretical and experimental mechanics of SPTI NRNU MEPhI.

**Areas of expertise**: research in the field of applied mechanics on the basis of the classical technical theories and methods, advances in technology and techniques; numerical and experimental activity with elements of research in the field of applied mechanics; engineering design, designing machines and structures to ensure their strength, sustainability, durability and safety, ensuring reliability and durability of units and parts of machines; design parts and assemblies with the use of IT technologies based on effective combination of advanced design methods and perform multivariate calculations.

**Objects of professional activity**: physical and mechanical processes and phenomena, machines, structures, instruments and apparatus and other facilities of modern technology, which for its learning and decisions require the development and application of experimental methods, mathematical and computer models based on the laws of mechanics.

**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 the graduate student is formed taking into account their choice of disciplines.

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.