Application of charged particle fluxes in the physics of extreme states of matter and nuclear technology

National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)

Degree or qualification is awarded: **Bachelor degree**

Language of study: **Russian**
Mode of study: **full-time, part-time**
Duration: **4 years**
Availability of free education: **yes**
Price: **80 860 – 110 900 rubles per semester**

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Goals of the Program

The education programm "Application of charged particle fluxes in the physics of extreme states of matter and nuclear technology" is aimed at training of the specialists in research, development and technology with charged particle beams, to provide graduates the necessary knowledge, competencies and skills for the professional work and admission graduate school.

Basic department

Extreme States of Matter

Characteristics of the scope and objects of professional activity of future graduates

The sphere of professional activity of the graduates is a research, design, production and technological, organizational and management activities at the National Research Centre "Kurchatov Institute" State Scientific Center of the Russian Federation - Institute for Theoretical and Experimental Physics, National Research Nuclear University "MEPhI" in institutes of the Russian Academy of Sciences, Rosatom enterprises and innovative high-tech business enterprises.

Brief description of the curriculum

The curriculum includes the development of students of basic natural sciences, physical and mathematical disciplines, a set of interrelated subjects of physical orientation in the control beams of charged particles and the physics of the interaction of particles with matter, computer modeling and analytical methods of diagnosis in the area of physics of the interaction of charged particles with matter and accelerators.

Specializations within this programme

Objects of the professional activity

The atomic nucleus, plasma, condensed state of matter, materials, nuclear reactors, charged particle accelerators, research, development of technologies, among others: the actual problems of condensed matter physics; interaction of radiation with matter, diagnosis and application of beams of heavy charged particles in the field of radiation and nuclear technology, analytical studies the interaction of particle fluxes with materials and objects.