

Condensed matter physics

National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)

Degree or qualification is awarded: **Master's degree**

Language of study: **Russian, English**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **137 500 rubles per semester**

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Place of education:

- **Obninsk Institute for Nuclear Power Engineering**

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Goals of the Program:

Research and teaching activities in condensed matter physics, laser and ion-plasma methods of modification of ceramics and composite materials, nano-materials.

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

Structural studies: X-ray and neutron diffractometry, vibrational spectroscopy, laser and beam technologies in material science: nonequilibrium metastable states in solids, induced by ion and laser beams; radiation damage of dielectrics, including ceramics and nano-structured materials; physical principles of sensors for radiation, thermal and electromagnetic fields.

Objects of the professional activity:

- New composite materials: production, processing, application;
- High-temperature ceramic and polymer composite materials, products made of polymer composites;
- Technologies for obtaining high-strength heat-resistant glasses for aviation and space technology;
- Photonics materials: nonlinear optical phenomena in fiber systems, energy conversion processes in optical materials

Specializations within this programme