

# Medical Physics

National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)

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

Language of study: **Russian**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **155 610 rubles per semester**

Programme curator: **Vladimir N. Belyaev**

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**Field of study:** "Physics".

**Duration of training:** 2 years, 120 credits.

**Course delivery language:** russian.

**Basic department:** "Medical Physics" (No. 35), Vladimir N. Belyaev, e-mail: [VNBelyaev@mephi.ru](mailto:VNBelyaev@mephi.ru).

**The program of continuous training:** Master of Science – Post Graduate.

Curriculum of Master Program "Medical Physics" includes basic disciplines (philosophical aspects of natural history, modern physics problems, special physics practical work) as well as special disciplines (electron-positron tomography, nuclear medicine, dosimetric planning of radiation therapy, MRI, ultrasonic medicine, physical chemistry of positron and positronium, synchronous radiation in biology and medicine, basics of medical database development, mathematical modeling in medicine and other).

Part of the curriculum is also implemented in English.

Considerable amount of time is devoted to scientific research practical work, which will provide working skills with modern equipment as well as ability of implementation of physical methods for practical solutions in the fields of radiology and therapy, radio isotopic diagnostics in medicine.

Professional field of graduates includes research, development and technology aimed to provide and evaluate medical diagnostic images, design, experimental research and implementation of equipment and methods of nuclear medicine, automatic systems of image processing and pattern recognition.

Graduates are welcomed for work at the center of advanced technology medicine (Dimitrovgrad city), National Research Centre "Kurchatov Institute" (Moscow city) and at others leading medical centers in Russia.

## Specializations within this programme

### Physics

#### Objects of the professional activity

Modern medical diagnostic instruments, devices for contact and non-contact radiation therapy, particle accelerators, electronic systems of nuclear and physical installations, radiation effects of ionizing radiation on humans and the environment, radiation technology in medicine, mathematical models for the theoretical and experimental study of phenomena and laws in physics of charged particle radiation, propagation and interaction of radiation with objects animate and inanimate nature.