

Medical physics of radiation therapy and radiology

National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)

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

Language of study: **Russian**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **178 750 rubles per semester**

Programme curator: **Vladimir N. Belyaev**

Tel.: **Contact name: Olga N. Petukhova, Phone number. +74957885699, ext. 8045.**

E-mail: ONPetukhova@mephi.ru

Program goal: The program “Radiotherapy and radiology” fundamentally prepares the student for professional work in a team with radiation oncologists, radiologists and other specialists in the therapy and diagnosis of cancer. It provides also the student with the basic knowledge necessary to start a career in management, industry and in the field of scientific and innovative research.

Basic department: Department of medical physics (№ 35)

Acquirements: Understanding of the laws governing the interaction of ionizing radiation with matter and the biological effects of radiation at the cellular and organism levels; the ability to calculate and measure the dose distribution for various radiotherapy and radiology technologies; the ability to create optimal radiation dosimetry plans and optimize radiological procedures for a specific patient.

Features of the teaching plan: The program is developed taking into account the latest recommendations of the IAEA and international organizations of medical physicists on the basis of many years of training experience accumulated in this direction at the NRNU MEPhI. Studies with students are conducted by well-known scientists and professors of Russia. Practical skills students receive in leading oncological clinics and scientific medical organizations of the country.

List of enterprises for practical training and future job:

Medical physicists, graduated from NRNU MEPhI, are in great demand both in Russia and in other countries. They occupy leading positions in medical and scientific organizations specializing in the field of oncology and radiology, such as the Russian Cancer Research Center, Scientific Research Institute of Neurosurgery, RSC of X-ray, Moscow Research Institute of Oncology, RSC Kurchatov Institute, Research Institute of Emergency Children's Surgery and Traumatology and others.

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.