

Energy-efficient, additive and hybrid laser technologies (in English)

National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)

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

Language of study: **English**

Mode of study: **full-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **91 650 rubles per semester**

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The program aim is to obtain the highest-depth vocational training allows graduates to work successfully in the field of activities related to laser physics, research and development of lasers, laser applications for technical, biomedical and information problems. Graduates of the Bachelor will have universal competences, contributes to their social mobility and demand in the labor market .

Area of professional activity: research aimed at the development of the theory, the designing and application of lasers and laser systems, both for distance and high-precision measurements and diagnostics, as well as for the development and use of new laser technology, including nanotechnology.

Educational plan: The main feature of the educational process of preparation is the fundamental physical and mathematical and engineering training in the main basic and special disciplines related to lasers and optical processes.

The research work of students is carried out in close connection with work carried out at the department and research organizations NTO "IRE-Polus", "Laser Center" MEPhI, institutes of the Russian Academy of Sciences and industry organizations.

Graduates of the department are trained for a wide range of problems in the first place, such as the development and construction of:

- Lasers and their components;
- Laser measuring systems;
- Software for processing and storing information, as well as for modeling of physical processes and of the various devices;
- Automated control systems;
- Systems of optical information processing.

The list of enterprises for practice and employment of graduates: Russian research centers, NTO "IRE-Polus", Institute of the Academy of Sciences.

This programme is also available in Russian language.

Specializations within this programme

Laser technique and laser technology

Objects of professional activity: lasers, laser processing tasks, the use of lasers in the field of medical physics, biophysics, condensed matter physics, physics of fast processes, information and diffractive optics, remote and high-precision measurements and diagnostics, mathematical models of theoretical and experimental studies of phenomena and laws in the field of laser physics, propagation and interaction of laser light with objects animate and inanimate

nature.