

12.04.05 Laser Engineering and Laser Technology

Laser Systems and Technologies

Program objective

Training highly-qualified specialists in laser research, design of laser systems and different-purpose devices, new laser technology design and application.

Graduates of this program apply their knowledge in the fields of physics, laser diagnostic and measuring systems, optical information systems, laser diagnostic devices for biophysics, condensed matter physics. This knowledge is vital for employment in leading research centers and companies specializing in laser and plasma industrial technologies.

Competitive advantages

- a range of basic and specialized unique courses required for training modern specialists in laser engineering and laser technologies
- research interests of a student are taken into account and complemented by a wide range of courses and thesis themes to choose from and big number of workshop hours
- modern experimental equipment in educational and scientific laboratories
- an opportunity to operate laser technological facilities based on high-power fiber lasers in MEPhI Laser Center and pass a professional examination in the framework of WorldSkills international program

Research areas and expertise:

- Laser technologies and equipment based on high-power fiber lasers;
- Study of interaction between high-power laser radiation and matter;
- Precision diagnostic and measuring laser systems;
- Optical image processing, radio photonics and holography;
- Optical methods of environmental monitoring.