

## **16.04.02 High-Tech Plasma and Power Plants**

### **Controlled Thermonuclear Fusion and Plasma Technologies**

#### **Program objective**

to provide high-quality physics and mathematics knowledge and engineering training to students. Studying of specialists in plasma technologies and controlled thermonuclear fusion of national thermonuclear program and the international program ITER for innovative plasma application in industry, ecology, and medicine. After graduation they are able to work in relevant high-tech industries and knowledge-based businesses.

Students form a general understanding about the methods of diagnostics, parameter operation and production of plasma («Low Temperature Plasma Physics», «Hot Plasma and Controlled Fusion», «Plasma Facilities» etc.).

#### **Practical training, research and career opportunities**

leading Russian and foreign research centers and companies that specialize in laser and plasma industrial technologies:

- International thermonuclear program and international ITER project;
- Academic institutes and centers exploring plasma and plasma-like matter, including extreme states, space and laboratory conditions;
- Companies dealing with innovative technological applications of plasma in the fields of production, ecology, medicine.

#### **Areas of research and training:**

- interaction between plasma and surface (the leading scientific center of the Russian Federation), including that within the facilities of controlled thermonuclear fusion
- physics of gas discharges and its application in lasers, ecology and medicine
- diagnostics of pulse and stationary plasma
- plasma technologies
- theory of plasma and its interaction with surface of condensed media