

### **13.03.02 ELECTRIC POWER ENGINEERING AND ELECTRICAL ENGINEERING**

All modern facilities of any industry and housing and communal services have a high level of electrification and structurally include a large number of electric power installations and devices. Design, implementation and maintenance of further operation of electric power systems and equipment requires the involvement of highly qualified specialists, the demand for which is extremely high. The main task of an energy specialist is to control the correct, efficient and safe production, distribution and consumption of energy. A specialist can participate in the development of special systems and devices that carry out these processes and increase the efficiency of their implementation.

Successful mastery of this direction provides graduates with a reliable prospect for career growth in specialized verticals, including the position of chief power engineer, or head of the automated process control system department, up to chief engineer and enterprise manager.

#### **Where will they teach?**

Electric power engineering and electrical engineering is one of the areas of study of the USTU Faculty of Technology, training in which is provided by the Department of Electric Power Engineering, Metrology and Forestry Technologies.

The duration of full-time study is 4 years, and the duration of part-time study is 5 years.

#### **Number of seats:**

**40 budget places for full-time education,**

**25 budget places for part-time and full-time education,**

**5 places for full-time education , 25 places for part-time education under an agreement for the provision of paid educational services .**

#### **What will they teach?**

- Calculate the parameters of various electrical installation devices in order to select equipment for the creation, modernization and re-equipment of power supply and electric drive systems.
- Design elements of power supply and electric drive systems in compliance with the necessary technical requirements for the design object.
- Organize installation, commissioning and operation of electrical installation equipment in accordance with the requirements of regulatory and technical documentation using the necessary software and hardware systems.

#### **Future Professions**

- Electrical installation operation specialist;
- Specialist in maintenance and repair of electrical power equipment;
- Power system dispatcher;
- Relay protection and automation engineer;
- Instrumentation and automation engineer;
- Engineer for maintenance, repair and operation of electrical installations;
- Design engineer / designer in the field of electrical equipment, networks and electric drives;
- Electrical engineer / - electromechanic / - power engineer;
- Chief Power Engineer / Head of Chief Power Engineer's Department;
- CEO / Director.

#### **Prospects**

Students of this program at USTU annually undergo industrial and pre-graduation internships at leading enterprises of the fuel and energy complex of the Komi Republic and Russia, such as: Gazprom Transgaz Ukhta LLC, Transneft -Sever JSC, Gazprom Burenie LLC, Ukhta Burenie branch, Lukoil - Ukhtaneftepererabotka LLC, Lukoil- Inform LLC , Promavtomatika LLC, Giprogazsentr OJSC, Komienargo Branch of MRSK Severo-Zapad PJSC, and others.

Graduates can work at power plants and electrical substations of various types, at electrified facilities in the oil and gas, woodworking, metallurgy and other industries, and in the housing and utilities sector.