# Industrial Heat Power Engineering

Far Eastern Federal University

Degree or qualification is awarded: **Candidate of Sciences**

Language of study: **Russian**
Mode of study: **full-time**
Duration: **4 years**
Availability of free education: **yes**
Price: **320 000 rub per year (full-time) / 160 000 rub per year (part-time)**

Programme webpage at the university website:
https://www.dvfu.ru/upload/medialibrary/a06/%D0%9F%D0%B5%D1%80%D0%B5%D1%87%D0%B5%D0%BD%D1%8C%20%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%20%D0%B0%D1%81%D0%BF%D0%B8%D1%80%D0%B0%D0%BD%D1%82%D1%83%D1%80%D1%8B,%20%D0%BE%D0%B1%D1%8A%D1%8F%D0%B2%D0%BB%D0%B5%D0%BD%D0%BD%D1%8B%D1%85%20%D0%B2%20%D0%BD%D0%B0%D0%B1%D0%BE%D1%80%202020%20%D0%B3%D0%BE%D0%B4%D0%B0.pdf

Programme curator: **Artem Grachev**
Tel.: **+74232652424 (#2206)**
E-mail: interadmission@dvfu.ru

Scientific specialty, combining research on the improvement of industrial heat and power systems, on the development and creation of new and most advanced heat engineering and thermal processing equipment. Within the framework of the specialty, the search for structures and principles of operation of heat engineering equipment is being carried out, which ensure the conservation of energy resources, reduction of energy costs per unit of production, conservation of material resources directed to the manufacture of heat transfer and heat recovery equipment, and environmental protection.

Research Areas:

Development of scientific foundations for the conservation of energy resources in industrial heat-and-power devices and heat-using systems and installations.

Optimization of schemes of power plants and systems for the generation and transformation of energy carriers based on the principles of their combined production.

Theoretical and experimental studies of heat and mass transfer processes in thermal systems and installations that use heat. Improvement of methods for calculating heat networks and installations in order to improve their technical and economic characteristics, save energy resources.

Development of new designs of heat transfer and heat recovery units with improved operational and technical and economic characteristics.

Optimization of parameters of thermal technological processes and development of optimal schemes of installations using heat in order to save energy resources and improve product quality in technological processes.

Development and improvement of devices that use heat, and the creation of optimal thermal systems to protect the environment.

Development of theoretical aspects and methods of intensive energy saving in thermal technological systems.

Development of theoretical foundations for the creation of low-waste and waste-free thermal process plants.

The area of professional activity of graduates who have mastered the postgraduate program in the direction 13.06.01 Electrical and Heat Engineering includes:

theoretical and experimental research, mathematical and computer modeling, design and design of materials,

devices, devices, installations, equipment complexes for electrical and heat engineering purposes, as well as a set of technical means, methods and methods of human activity for the production, distribution of electrical and thermal energy, management its flows and the transformation of other types of energy into heat;

design, construction, creation, installation and operation of electrical and electronic devices;

operation of modern industrial enterprises, transport systems, thermal, hydro and nuclear power plants, factories, power lines.

The objects of professional activity of graduates who have mastered the program postgraduate studies in the direction of training 06/13/01 Electrical and heat engineering and are:

small-scale power engineering; unconventional energy sources;

power units, steam and gas and gas turbine plants;

heat pumps;

fuel cells, hydrogen power plants;

heat and mass transfer devices for various purposes;

thermal and electrical networks;

coolants and working fluids of power and heat technology installations;

standardization systems;

systems and diagnostics of automated control of technological processes in heat and power engineering.

## Specializations within this programme