

Division: *Institute of Engineering and Technology, Department of Thermal Power Engineering*

Academic programme: *13.04.01 Heat and Power Engineering, Master's programme, Theory and Practice of Analytical Methods for Evaluating and Studying Heat-and-Mass Exchange Processes*

Mode of study: *full-time, part-time*

Programme length: *2 years, 2.5 years*

Programme level: *Master's degree*

Language of instruction: *Russian*

Programme description: *The programme is designed to solve theoretical and applied problems in heat power engineering. Students examine methods of thermodynamic analysis of thermal schemes and devices. Graduates are able to construct energy balances and apply methods of optimization and numerical modelling. In addition, graduates gain knowledge in refrigeration and cryogenics. Heat power engineering is a universal specialty which is not tied to any specific type of company. Thermal power engineers are in demand everywhere: thermal power stations, thermal networks, boilers. At factories and plants, thermal power engineers service compressor and pumping stations, air separation units, gas and air supply systems, industrial air conditioning systems, and heating and water supply systems. At thermal power plants, thermal power engineers work as boiler and turbine operators, steam and gas plant operators, linemen, installers, and repairmen. In housing and communal services, thermal power engineers work in heat supply and management companies. In addition, no building or industrial facility can be designed without thermal power engineers: only thermal power engineers can design heating networks, thermal boiler houses, gas piston plants, and heating, ventilation, and gas supply systems.*

Main programme-specific classes:

- *Low-temperature Heating Systems and Networks*
- *Heat Regenerator Systems*
- *Analytical Methods of Evaluating and Studying Heat-and-Mass Exchange Processes*

Programme manager: *(Head of the Department of Industrial Thermal Engineering, Candidate of Sciences (Engineering), Associate Professor Konstantin V. Osintcev)*