

Degree	Master
Learning mode	Full-time
Specialization	Electric power engineering
Program duration	2 years (120 ECTS), official start date September, 1
Language of instruction	English
Entrance requirements	<p>Academic Entry Requirements: Bachelor Degree or equivalent degree and qualification.</p> <p>English Language Requirements: English as a native language / IELTS (5.5 or better) or Equivalent Certificate / TPU Entrance Test</p> <p>Selection process: All individuals are selected on their results of TPU Entrance Exams. Additional selection criteria: GPA in Bachelor Program; relative merits and abilities of the applicant, approved by certificates.</p>
Tuition fee (per year)	227 490 RUB

Electric power generation and Transportation are one of the main aspects of life in modern world. Climate change, economical reasons and science progress lead to the transformation of the requirements in the field of electric power generation and transportation. Electric energy generation is closely related with location of energy resources such as water (for hydrostations) and fuel while energy consumers are dissipated in wide area faraway from power suppliers. Transportation of electric energy at long distances causes necessity of building large electric networks and accompany with energy losses in them. All of this creates reasons of studying developing and using of Renewable Energy Sources and developing of parameters and regimes of Electric Energy Transportation from large power suppliers such as classic electric stations. Those kinds of technician experts are need be studied according to this master program.

Program Overview

The program offers students an extensive and detailed study in the key areas pertaining to Renewable Energy Sources and Electric Energy Transportation. The objective of the program is to prepare students for a career in Electric Power Generation and Transportation that require specialized knowledge and skills. It is expected that the graduates will be able to work as engineers in industry, government or continue their education by pursuing a PhD degree.

The program provides deep and bread knowledge necessary for practicing professionals in Electric Power Generation and Transportation. Under the guidance of a research supervisor and a multi-disciplinary team of scientific and engineering faculty, each student has the opportunity to engage in an in-depth study of particular problems, such as development of electric networks based on Renewable Energy Sources and finding optimal regimes for transportation of electric energy.

Main Modules

- Operative Dispatch Control in Power Systems
- Software for Electric Power System Operating
- Emergency Control in Power Systems

- Protection Relay of Electric Systems;
- Integration of Renewable Energy Plants in Electric Power Supply Systems

Learning Outcomes

- Apply mathematical, scientific, social and economic knowledge for theoretical and experimental research in the field of Electric Power Generation and Transportation and power installations.
- To be able to develop new and original ideas and design methods for solving engineering problems in leading areas of Electric Power Generation and Transportation, modernization and improvement of its advanced technological chains.
- To be able to plan and carry out analytic, modeling and experimental research in Electric Power Generation and Transportation using the latest achievements of science and technology.
- Preparation of the graduate for production activities in the field of operation, installation and commissioning, service maintenance and testing, diagnostics and monitoring of electric power and electrical equipment in accordance with the specialization of training.
- Preparation of the graduate for independent study and development of new knowledge and skills, continuous self-improvement for the full realization of his professional career, performing the functions of the teacher in the implementation of educational programs in educational institutions.

Career Opportunities

Career fields and types of organizations: Electric Power Generation and Transportation

Positions: engineer

Internships: TPU

Further Studies: Postgraduate study, postdoctoral study. Postgraduate studies in TPU are available only in Russian.

Academic staff

- Isaev Yu. Niyazbecovich, Sc.D professor
- Prokhorov A. Viktorovich, PhD, assistant professor
- Surkov M. Alexandrovich, PhD, assistant professor
- Ilyas A. Rahmatullin, PhD, assistant professor