National Technical University “Kharkiv Polytechnic Institute”

Educational and scientific institute of power engineering, electronics and electromechanics

Electric Power Stations
http://sites.kpi.kharkov.ua/es/index.php/WelcomeU

Specialization of Electric Power Engineering, Electrical Engineering, and Electromechanics

Two specialties:
- Electric Power Stations
- Energy Management and Energy Efficient Technologies

Two-step power engineering specialists training:
Bachelor’s level (4 years, 240 ECTS credits)
Master’s level (1,5 years, 90 ECTS credits, 2 years, 120 ECTS credits)
Specialty of Electric Power Stations

Bachelor’s Degree in Electric Power Engineering, Electrical Engineering, and Electromechanics

Master’s Degree in Electric Power Stations
Areas of knowledge application:
- Electric power plant and substation equipment designing
- Electric power plant and substation equipment operation and control
- Renewable generation plant designing and operation
- Electric power equipment simulation
Our graduates work at:

- Electric power plants (electrical departments)
- Electric grid companies
- Power plant equipment repair and maintenance companies
- Power equipment designing organizations
- Power engineering research institutes
- Renewable energy system design and installation companies
- Multinational electrical equipment companies (e.g. ABB, Schneider Electric, Siemens, Alstom, etc.)
Bachelor’s educational program:
- Mathematical Problems of Power Engineering
- Theory of Electrical Engineering
- Electromagnetic and Electromechanical Transients
- Electrical Machines
- Electric Power Plants and Substations
- Electric Power Plant Equipment Design
- Electric Power Supply Systems

Master’s educational program:
- State-of-the-Art Electric Power Plant Equipment
- Electric Power Plant Equipment Simulation
- Renewable Generation Plant Equipment
- Electric Power Plant CAD
- Electric Power System Automation
- Electric Power System Security
- Power System Operation Optimization
- Modern Mathematical Tools
Specialty of Energy Management and Energy Efficient Technologies

Bachelor’s Degree in
Electric Power Engineering, Electrical Engineering, and Electromechanics

Master’s Degree in Energy Management
Areas of knowledge application:

- Energy audit of various facilities used for economic activities
- Implementation of energy management system at enterprises and organizations according to ISO 50001
- Development and promotion of energy efficiency advancement measures at businesses and homes
- Designing and installation of renewable energy systems
Our graduates work at:

- Energy management departments
- Office of the chief power engineer at industrial enterprises
- Energy supply companies
- Energy service companies
- Renewable energy system design and installation companies
- Research and design organizations in the field of power engineering and energy-efficient technologies
Bachelor’s educational program:
- Energy Management and Audit
- Electric Power Plants and Substations
- Thermal Engineering
- Financial Appraisal of Energy Saving Projects
- Economic Appraisal of Energy Saving Problems
- State-of-the-Art Energy-Efficient Technologies
- State-of-the-Art Energy Sources and Cogeneration Plants

Master’s educational program:
- Energy Policy and Energy Marketing
- Energy Management and Energy Audit
- Electric Power Quality and Quality Control
- Optimization Problems in Energy Saving
- State-of-the-Art Problems and Mathematical and Computer-Aided Modelling Methods
- Power Technology Combining and Renewable Energy Resources Application
- State-of-the-Art Power Industry Problems, Technologies, and Outlook