

Educational program Profile

General Information	
The official name of educational program	Electric systems and complexes of vehicles
Specialty	141 Power Engineering, electrical engineering and Electromechanics
Branch of knowledge	14. Electrical Engineering
Higher education level and qualification name	Master's degree, Master in Power Engineering, Electrical engineering and Electromechanics
Type of diploma and volume of educational program	Master's degree, single, 90 ECTS credits, training period 1 year 4 months
Availability of accreditation	Ministry of Education and Science of Ukraine, certificate of accreditation УД № 21002010, Validity period to 01.07.2023
Cycle/Level	Second (master) level NRC of Ukraine – 8 level FQ-EHEA – The second cycle EQF-LLL – 7 level
Requirements to the level of education of entrant	First (Bachelor) level
Language(s) of teaching	Ukrainian
Validity of educational program	5 Years
Aim of educational Program	
	The purpose of the program-formation of applicants for higher education aggregate of knowledge, skills and abilities for use in professional activities in the field of electrical energy, electrical and electromechanical systems and complexes through theoretical and practical training
Characteristics of educational Program	
Domain	<p>Object: Production, management, educational and scientific institutions, institutions, organizations, enterprises, companies in the field of electricity, electrical engineering and electromechanics.</p> <p>Purpose of training: training of specialists in electromechanical systems capable of: construction, design, operate, organize installation, adjustment and repair, create new equipment and introduce the latest technologies, conduct scientific Research and conduct teaching activities.</p> <p>Theoretical subject area content: Fundamental knowledge of the theory of electrical engineering, modeling and optimization of power, electrical and electromechanical systems and complexes, their use for innovation and research of Electric Machines, electric drives, automation systems.</p> <p>Methods, techniques and technologies. The applicant must master the methods and means of research processes in equipment in electrical and</p>

	<p>electromechanical systems and complexes, automated construction, design and production.</p> <p>Tools and equipment: tools, devices, systems, design technologies, operation, control, monitoring.</p>
Orientation of educational Program	Electric systems and complexes of vehicles
Main focus of educational program and specialization	<p>Special education and professional training in the field of electric systems and complexes of vehicles</p> <p>Keywords: Vehicles, design, digital control systems, computer-aided design, information technology, special electric drives, repair, electrical equipment, electrotechnology installations.</p>
Program features	<p>Requires special practices for operation and assembly</p> <p>- vehicles.</p>
Graduates ' suitability for employment and further education	
Suitability for employment	<p>2143.2 Manager of the joint control system of power</p> <p>2143.2 An engineer with an emergency automatic operation</p> <p>2143.2 Relay Protection engineer and Electroautomatics</p> <p>2143.2 Engineer of dispatch and technological control equipment</p> <p>2143.2 Engineer Service Lines Energy Enterprise</p> <p>2143.2 Engineer of the substations service</p> <p>2143.2 Distributive Network engineer</p> <p>2143.2 Energy Engineer</p> <p>2143.2 Design Engineer (Electrical engineering)</p> <p>2145.2 Engineer on the diagnosis of technical condition of wheeled Vehicles (machine-tractor fleet, road-building machines on wheeled chassis and motorcycles)</p> <p>2145.2 Instrument Engineer</p> <p>2145.2 Engineer with equipment Complectation</p> <p>2145.2 Engineer on mechanization and automation of production processes</p> <p>2145.2 Engineer with mechanization labor-intensive processes</p> <p>2145.2 Locomotive receiving engineer (wagons) at depot</p> <p>2145.2 Design Engineer (mechanics)</p> <p>2145.2 Mechanic Engineer Group</p> <p>2145.2 Engineer-Technologist (mechanic)</p> <p>2144.2 Design Engineer (Electronics)</p> <p>2144.2 Electronics Engineer</p> <p>2149.2 System Analyst (except computers)</p> <p>2149.2 Dispatcher Service Control Manager</p> <p>2149.2 Dispatcher of the Wagon Fleet regulation</p> <p>2149.2 Traffic Service Manager</p> <p>2149.2 Track Manager</p> <p>2149.2 Manager-Instructor Traffic service</p> <p>2149.2 Expert in energy saving and energy efficiency</p>

	<p>2149.2 Engineer of the setup and testing</p> <p>2149.2 Engineer of Objective control</p> <p>2149.2 Engineer of exploitation and repair</p> <p>2149.2 Engineer on the design of mechanized developments</p> <p>2149.2 Maintenance Engineer</p> <p>2149.2 Engineer of repair</p> <p>2149.2 Engineer on settlements and regimes</p> <p>2149.2 Transport Engineer</p> <p>2149.2 Engineer for the introduction of new technology and technology</p> <p>2149.2 Research Engineer</p> <p>2149.2 Design Engineer</p> <p>2149.2 Controller Engineer</p> <p>2149.2 Laboratory Engineer</p> <p>2149.2 Technology Engineer</p>
Further training	Degree of Doctor of Philosophy
Teaching and evaluation	
Teaching and Learning	Training, self-learning, problem-oriented studies, remote
Evaluation	Written examinations, protection of practical works, protection of coursework projects and works, test tasks, protection of Master's work.
Program Learning Outcomes	
Programmatic learning outcomes defined by the standard	<ul style="list-style-type: none"> – Find options to improve energy efficiency and reliability of electrical and electromechanical equipment and appropriate systems and systems. – Reproduce processes in the electrical energy, electrical and electromechanical systems in their computer modeling. – To master new versions or new software designed for computer modeling of objects and processes in electrical, electrical and electromechanical systems. – Outline the plan of measures to improve reliability, operation safety and continuation of resource of electric energy, electrotechnical and electromechanical equipment and corresponding complexes and systems. – Analyze the processes in the electric power, electrotechnical and electromechanical equipment and corresponding complexes and systems. – To reconstruct existing electrical networks, stations and substations, electrical and electromechanical complexes and systems to improve their reliability, operation efficiency and resource continuation. – Possess methods of mathematical and physical modelling of objects and processes in electrical energy, electrical and electromechanical systems. – Take into account the legal and economic aspects of research and innovation activity. – Search for resource support sources for additional education, scientific and innovative activities.

	<ul style="list-style-type: none"> – To present research materials at international scientific conferences and seminars on modern problems in the field of electric power, electrical engineering and electromechanics. – To justify the choice of direction and research methods taking into account modern problems in the field of electric power, electrical engineering and electromechanics. – To plan and perform research and innovative projects in the field of electricity, electrical engineering and electromechanics. – To participate in compatible researches and developments with foreign scientists and experts in the field of power engineering, Electrotechnical, Electromechanics. – To adhere to the principles and directions of Ukraine's energy security strategy. – To combine different forms of research work and practical activity in order to overcome the gap between theory and practice, scientific achievements and their practical implementation. – To adhere to the principles and rules of academic integrity in educational and scientific activities. – To demonstrate understanding of regulatory and legal acts, norms, rules and standards in the field of electricity, electrical engineering and electromechanics. – Freely communicate orally and writing to the State and foreign languages of modern scientific and technical problems of power, electrical engineering and electromechanics. – Identify problems and identify restrictions related to environmental issues, sustainable development, human health and safety and risk assessments in the field of electricity, electrical engineering, and electromechanics. – Identify key factors and technical problems that may interfere with the introduction of modern methods of power management, electrotechnical and electromechanical systems.
<p>Program learning outcomes, defined by a higher educational institution</p>	<ul style="list-style-type: none"> – To be able to use integrated approaches to program development and methods of management of urbanized territory ecological status; – Be able to implement the organization of works related to the assessment of technical condition of electrical systems, environmental protection and optimization of electromechanical systems in conditions of incomplete information and contradictory requirements; – Be able to develop their own technical projects by creative application of existing and generating new ideas; – Be able to assess the level of automation of electrical systems and increase their characteristics; – To participate in the management of engineering and technical activities and/or technical projects.
<p>Resource support for implementation of the program</p>	
<p>Staffing support</p>	<p>Over 70% of scientific and pedagogical staff involved to teaching vocational-oriented disciplines, have scientific degrees in the specialty</p>

Material and technical support	The use of modern equipment of leading electromechanical companies, in particular Schneider Electric
Information and educational and methodological support	Use of the distance learning system and author's development of teaching staff
Academic Mobility	
National Credit Mobility	On the basis of bilateral agreements between the institution and technical Universities of Ukraine
International Credit Mobility	
Training of foreign higher education applicants	