Bacheleor. [Aims and results of module educaion programms](https://it.auezov.edu.kz/rus/stranitsy-ru/256-celi-i-rezultaty-obucheniya-obrazovatelnoy-programmy-bakalavriata-1)

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| 6B07150 Electroenergetics |
| EP purpose | Educational outcomes |
| Preparation of highly qualified, competitive in the labor market specialists in the field of electricity, capable of self-development and the implementation of core activities according to the qualifications of a bachelor of engineering and technology. | 1. Communicate freely in a professional environment and society in razakh, russian and english, applying the principles of academic writing and a culture of academic honesty.2. Present natural science, mathematical, social, socio-economic and engineering knowledge in professional activities, based on the methods of mathematical data processing, scientific and experimental research.3. Have information and computational literacy, the ability to generalize, analyze and perceive information, setting goals and choosing ways to achieve it.4. Develop a model of a digital control system for an electric drive, using innovative programs and data on the technological and design properties of the designed object.5. Create models of electromagnetic processes in electrical machines, converting devices and systems using modern calculation methods.6. Develop plans, programs and methods for the installation, adjustment, operation and testing of electrical equipment, diagnostic and repair measures for electrical equipment, using the main methods and schemes of installation and dismantling.7. Ensure the reliability of electric power systems and the quality of electricity by analyzing the functionality of local electrical systems, intelligent technologies and principles of modern design of electric power systems.8. Develop a feasibility study of measures to improve the operation of equipment in compliance with safety and labor protection standards9. Use research, entrepreneurial, and uncertainty-based skills.10. Demonstrate the skills of self-education, self-education, healthy lifestyle, teamwork. |
| 6B07151 Electric Power Supply |
| Preparation of highly qualified, competitive in the labor market specialists in the field of power supply, capable of self-development and the implementation of core activities according to the qualifications of a bachelor of engineering and technology | 1. Communicate freely in the professional environment and society in Kazakh, Russian and English with an understanding of the principles of the culture of academic honesty2. Based on the methods of mathematical data processing, scientific and experimental research, regulatory documents and elements of economic analysis, demonstrate natural science, mathematical, social, socio-economic and engineering knowledge in professional activities3. Apply information and computing literacy, to the analysis of information, statement of the purpose and the choice of ways of its achievement4. To obtain and analyze the necessary calculation data based on innovations in electric power technologies and current trends in the development of digital REA and automated control systems to optimize the operating modes of the power supply system5. On the basis of electromagnetic processes, electrical properties of materials, operational properties of electrical equipment, modern power supply schemes to describe the processes of production, conversion and transmission of electrical energy6. Based on the developed techniques of installation, adjustment, operation and tests of an electric part of the equipment to create the theoretical models allowing to analyze a state and to predict properties and behavior of objects of power supply7. According to ways, methods and modern measuring instruments, information technologies and labor protection in utility power systems to make diagnostic and repair actions of an electric part of the equipment8. Prove technical, economic, ecological criteria for evaluation of electrotechnical complexes and systems at the solution of the electrotechnical tasks increasing efficiency of use of energy resources9. Use research, enterprise skills and skills of work in non-standard conditions10. Effectively work individually and as a team member, correctly defend your point of view, correct your actions and use various methods |
| 6B07152 Engineering of electric power systems |
| Preparing sought after specialist with cultural and professional competencies that contribute to their social mobility and adaptations in the labor market on the basis of integrated knowledge in the field of electric power industry | 1. Communicate freely in the professional environment and society in Kazakh, Russian and English with an understanding of the principles and culture of academic integrity;2. Based on the methods of mathematical data processing, scientific and experimental research, regulatory documents and elements of economic analysis, demonstrate natural scientific, mathematical, social, socio-economic and engineering knowledge in professional activities;3. To possess information and computational literacy, the ability to generalize, analyze and perceive information, set a goal and choose ways to achieve it;4. To optimize power supply systems using the trends of digitalization of intelligent power systems;5. To create theoretical models for the analysis and forecast of the properties and processes of power supply facilities, using the technique of installation, commissioning, operation and testing of the electrical part of the equipment;6. To describe processes in electrical machines, converting devices and power supply systems, using modern methods for calculating electrical circuits, electromagnetic processes and electrical properties of materials;7. To modernize power supply facilities, carry out diagnostic and repair measures for electrical equipment, in accordance with technique and methods applying the modern measuring instruments and information technology;8. To make design electrical equipment and power supply systems based on trends in the development of science and technology;9. To substantiate technical, economic, environmental criteria for assessing electric power complexes and systems during their creation and operation, and to develop measures to increase the efficiency of energy consumption, use of energy resources and reduce of energy losses;10. Can use research and entrepreneurial skills in the face of uncertainty11. To demonstrate skills of self-education, discipline, healthy lifestyle, teamwork. |
| 6В07140 - Heat Power Engineering |
| Training of competitive specialists who meet the needs of the labor market, who have an integrated system that ensures professional activities in the field of heat power engineering. | 1. Communicate freely in the professional environment and society in Kazakh, Russian and English, understanding the principles and culture of academic integrity.2. Demonstrate natural science, mathematical, social, socio-economic and engineering knowledge in professional activities, methods of mathematical data processing, scientific and experimental research, regulatory documents and elements of economic analysis.3. Apply information and computer literacy; digital technology and application software.4. Choose the water-chemical mode of heating networks, boiler units, heat engines and superchargers, the mode of regulating the operation of thermal processes.5. Apply methods of analysis and calculation of the processes of thermodynamics, hydrodynamics, heat and mass transfer to increase efficiency in heat and power devices and apparatuses.6. Apply the basic laws of electrical and magnetic circuits, methods of production, transmission and distribution of electrical energy, technical means for measuring thermal and electric power installations.7. To make technical and economic calculations in the selection of heat and mass transfer devices, automatic control of thermal power plants and ways to solve environmental problems of thermal power.8. Perform design, operational, installation and adjustment works of thermal power facilities, through modeling and optimization of thermal equipment, based on an analysis of the technical performance of turbines and auxiliary equipment.9. Conduct tests, organize and carry out repairs, operation and maintenance, protection against corrosion of heat power and heat technology equipment.10. Make decisions in non-standard situations, assess risks using research, entrepreneurial skills.11. Demonstrate the skills of self-education, self-education, a healthy lifestyle, teamwork.12. To carry out the collection and interpretation of information for the formation of judgments, taking into account social, ethical and scientific considerations, from the point of view of worldview, civil and moral positions. |