6B07140 Heat power engineering

**PASSPORT of the EP**

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| Name of the EP | 6В07140 - Heat Power Engineering |
| Code and Classification of Education | 6B07 - Engineering, processing and construction branches |
| Code and Classification of Areas of Training | 6B071 – Engineering and engineering business |
| Group of educational programs (EP) | В063 – Electrical engineering and energy |
| Languagelearning | Kazakh, Russian, English |
| The complexity of EP | 240 credits |
| Distinctive features of  EP | - |
| Partner University (JEP) - | - |
| Purposeof the EP | Тraining 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. |
| Name of the degree awarded | «Bachelor of Engineering and Technology» |
| Field of professional activity | The branch of technology that includes the research, design, construction and operation of technical means for the production, conversion, application of heat and control of its flows. |
| Learning outcomes | **LO1** Communicate freely in the professional environment and society in Kazakh, Russian and English, understanding the principles and culture of academic integrity.  **LO2** 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.  **LO3**Demonstrate information and computer literacy, digital technology, and application software.  **LO4**Select the water-chemical mode of heating networks, boiler units, heat engines and superchargers, the mode of regulation of thermal processes.  **LO5** Apply methods of analysis and calculation of thermodynamics, fluid dynamics, heat and mass transfer processes to improve efficiency in heat and power devices and apparatuses.  **LO6** Apply the basic laws of electrical and magnetic circuits, methods of production, transmission and distribution of electrical energy, technical means for measuring heat and electricity installations.  **LO7** Produce technical and economic calculations for the selection of heat and mass transfer apparatus, automatic control of thermal power plants and ways of solving environmental problems of thermal energy.  **LO8** Perform design, operation and installation and commissioning of thermal power facilities through modeling and optimization of thermal equipment, based on the analysis of the technical performance of turbines and auxiliary equipment.  **LO9** Conduct tests, organize and carry out repairs, operation and maintenance, corrosion protection of thermal power and thermal process equipment.  **LO10**Make decisions in non-standard situations, assess risks, using research, entrepreneurial skills.  **LО11**Demonstrate skills of self-education, self-education, healthy lifestyles, and teamwork.  **LO12**Collect and interpret information to form judgments with social, ethical, and scientific considerations, in terms of worldview, civic, and moral positions. |