



6B07109 – “Electrical engineering”



Be able to:

- to describe the basic physical and thermodynamic laws, as well as concepts and methods of application of modern automated computer programs;
- apply electrical drawings and diagrams provided in the technical documentation when solving electrical problems;
- to test protection and automation devices for individual elements of the power system with further analysis of their behavior in emergency situations;
- solve electrical engineering problems using methods and tools of modern electrical technologies and power electronics;
- to develop modern automated systems for various technological lines and processes using digital and microcontroller technologies;
- design power supply systems using original methods and in compliance with labor protection rules to achieve competitive results in production;
- to develop energy supply systems based on alternative and renewable energy sources using computer modeling methods;



To know and understand:

- basic electrotechnical laws and methods of electricity distribution
- the laws of statics, kinematics and dynamics for determining the kinematic characteristics of structural elements;
- basic electromechanical power converters for power supply and electric drive systems;
- circuits and elements of the main equipment, secondary circuits, protection devices and automation of electric power facilities;
- lighting installations of agricultural and industrial premises;
- the elementary basis of relay protection and automation, the history of the development of the discipline, the purpose of the function and scope of relay protection and automation devices in power supply systems;
- methods for calculating protection devices for elements of power supply systems;
- use methods for calculating short-circuit currents;- functioning schemes operating in the organization of automatic control systems;
- methods of converting various types of energy into electrical energy



Be competent in matters of:

- in modern trends in the development of electricity supply and its application in research, design, production, technological, organizational and managerial activities
- in installation and commissioning activities: development of installation, commissioning and repair documentation of power supply systems;
- in organizational and managerial activities: in organizing the work of a team of performers; in choosing a solution that meets the various requirements of power supply systems.