# 6B08702 - “Energy supply of agriculture”

## Be able to :

–to use the skills of working with design and estimate documentation, regulatory frameworks and methods of ensuring electrical safety at the design stage of power supply systems for enterprises of the mineral resource complex

-to choose the optimal schemes and parameters of power supply, design electrical substations, transverse and longitudinal compensation installations, filter compensating devices; protection devices and power grid automation of power transmission lines, transformers, tires, distribution devices and consumers of electricity.

–to use and program modern microcontroller tools in the development of process automation systems-design lighting installations for agricultural and industrial premises

–solve and select operating modes of electric power plants for various purposes, determine the composition of equipment and its parameters, schemes of electric power facilities.

## 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.