# POWER SUPPLY FOR INDUSTRIAL AND TRANSPORT PLANTS

## COURSE SYLLABUS ABSTRACT

6-05-0713-04 Automation of technological processes and production
(speciality code and name)

Automated electric drives
(concentration)

| | STUDY MODE | | |
|---|---|---|---|
| | full-time | part-time | part-time (shortened program) |
| Year | 4 | 4 | 4 |
| Semester | 8 | 7 | 7 |
| Lectures, hours | 20 | 6 | 6 |
| Practical classes (seminars), hours | 14 | 4 | 4 |
| Laboratory classes, hours | 14 | 4 | 4 |
| Course paper, semester | 8 | 7 | 7 |
| Exam, semester | 8 | 7 | 7 |
| Contact hours | 48 | 14 | 14 |
| Independent study, hours | 42 | 76 | 76 |
| Total course duration in hours / credit units | 90/3 | | |

**1. Course outline**

The purpose of the academic discipline is to develop students' theoretical and practical knowledge base in the field of power supply systems; familiarization with the modern element base in this field of knowledge.

**2. Course learning outcomes**

Upon completion of the course, students will be expected to

know:

- the current state of power supply for enterprises and transport facilities in the Republic of Belarus and the electric power industry as a whole;
- new methods for efficient energy consumption; fundamental principles of the theory of power supply for industrial and transport facilities;
- modern technology for the production, transmission, and distribution of electric power;
- basic methods for calculating power supply circuits for industrial and transport facilities;

be able to:

- use modern methods for metering and measuring active and reactive energy;
- use regulatory documents (standard and technical specifications) when designing new power supply systems for industrial enterprises (workshops, sections) and transport facilities;

possess a skill:

- calculate and design power supply circuits for industrial and transport facilities;
- place orders for mass-produced electrical equipment for power supply systems;
- calculate the center of economic loads and short-circuit currents using a computer.

**3. Competencies**

To know modern power supply systems for industrial installations and vehicles and be able to design them.

**4. Requirements and forms of midcourse evaluation and summative assessment**

Ongoing assessment includes assessment of coursework, as well as evaluation of the completion and defense of laboratory assignments. Midterm assessment takes the form of an exam.