

ELECTRICAL ENGINEERING AND ELECTRONICS

COURSE SYLLABUS ABSTRACT

Specialty: 6-05-0722-05- Production of products based on three-dimensional technologies

	Form of higher education
	Full-time (day)
Year	2
Semester	4
Lectures, hours	34
Practical classes (seminars), hours	16
In-class test (semester, hours)	16
Exam, semester	4
Classroom hours for the academic discipline, hours	66
Independent work, hours	114
Total course duration in hours / credit units	180/5

1. Summary of the academic discipline. The discipline belongs to the module « General technical disciplines ». The task of the discipline is to form the concept of the principles of operation and design of electronic devices, experimental study of their operation in various modes on laboratory devices and computers, as well as the use of electronic and digital devices in solving various technical problems.

2. Learning outcomes. As a result of mastering the discipline, the student should know: electro-technical laws and methods of analysis of electrical and magnetic circuits; the purpose and principle of operation of the main components of modern equipment containing electrical machines, apparatuses and elements of automation, electrical measuring devices; electrical terminology and symbols.

be able to: experimentally determine the parameters and characteristics of typical electrical devices; turn on electrical devices and machines, control them and monitor their efficient and safe operation; professionally draw up technical specifications for the development of automated control systems for production processes together with electrical engineers.

possess: methodology for selecting electrical products to ensure the functioning of electrical machines and apparatuses; methodology for reading electrical circuits and determining the characteristics of typical electrical devices.

3. Formed competencies: Select and operate electrical, electronic and electrical measuring devices to control production processes, solve energy saving issues.

4. The form of the current certification: exam (oral-written form). In order to be admitted to the test, the student, in accordance with the curriculum, is obliged to perform and defend laboratory work, as well as individual assignments and control work.