

COURSE SYLLABUS ABSTRACT

Specialty: 6-05-0713-04 – Automation of technological processes and productions

Profiling: Automated electric drives

	Form of higher education	
	Full-time (day)	Part time
Year	2	2
Semester	4	4
Lectures, hours	34	8
Laboratory, hours	34	8
Exam, semester	4	4
Total hours in class	68	16
Independent work, hours	76	128
Total hours in the discipline/ credit	144/4	

1. Summary of the academic discipline. The discipline belongs to the module "Design of electronic devices". The objectives of the discipline are the formation of the concept of the principles of operation and design of semiconductor devices, the experimental study of their operation in various modes on laboratory installations 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 must:

know: the main semiconductor devices, the main characteristics and parameters of semiconductor devices, the functional purpose and principle of operation of various electronic circuits, the main characteristics and parameters of various electronic circuits.

be able to: experimentally determine the parameters and characteristics of semiconductor devices and electronic circuits, calculate the circuits of electronic devices, as well as their main parameters and characteristics.

have the skill to: select semiconductor devices, read electrical circuits and determine the characteristics of typical electronic devices.

3. Formed competencies: Possess engineering methods for calculating semi-conductor converters of electric energy and be able to apply them.

4. The form of the intermediate certification: examination (oral and written form). In order to be admitted to the exam, the student must complete and defend laboratory work, as well as individual assignments, in accordance with the curriculum.